

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

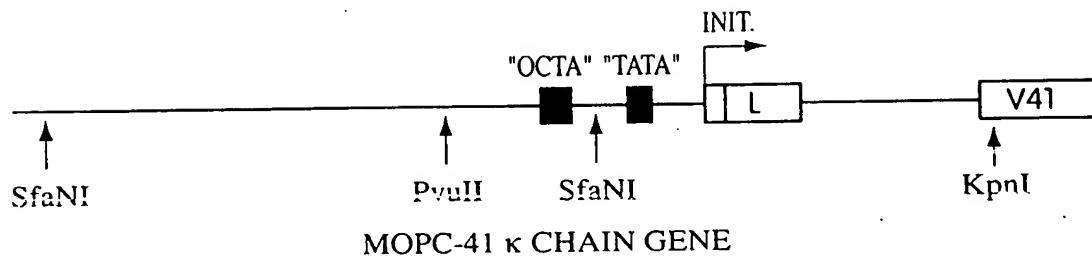


Fig. 1A

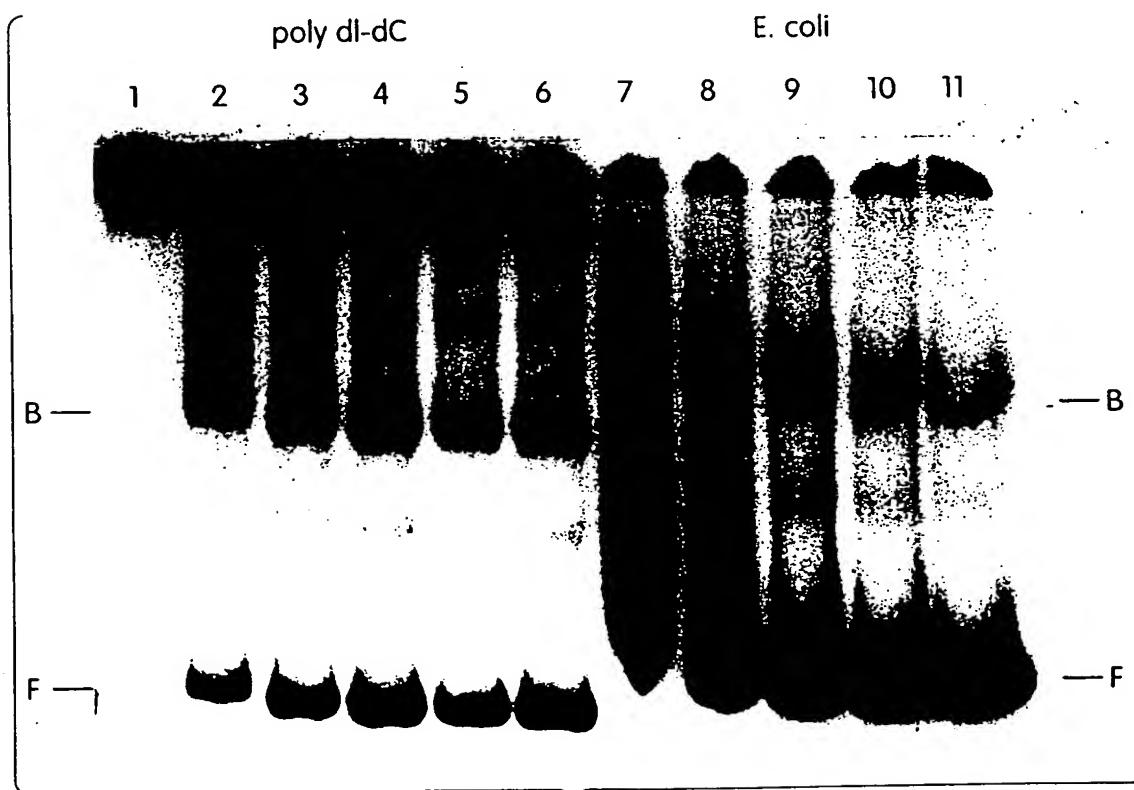


Fig. 1B

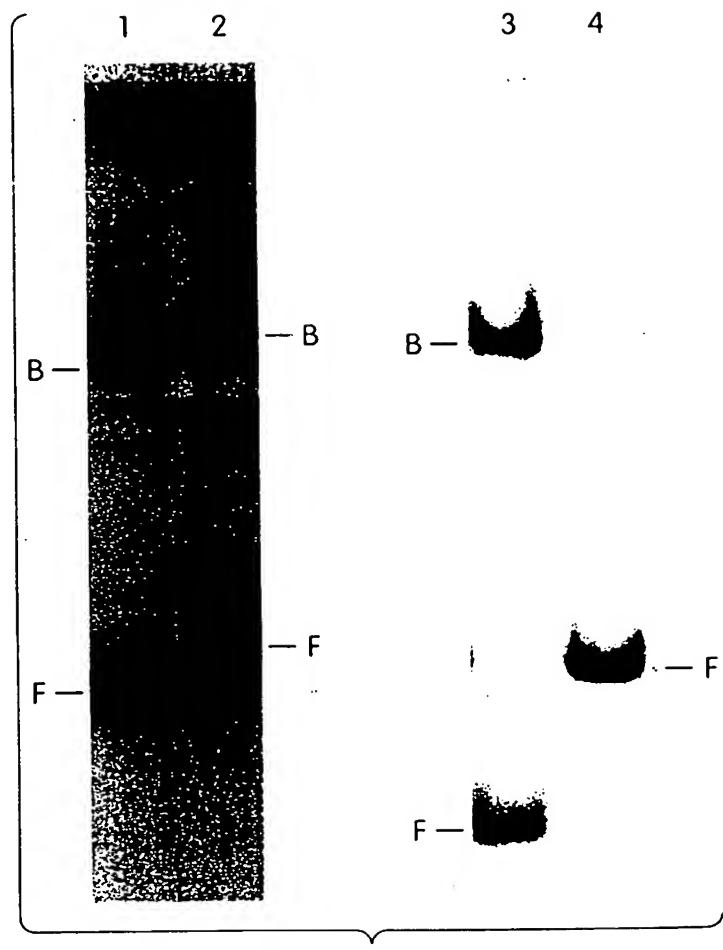


Fig. 1C

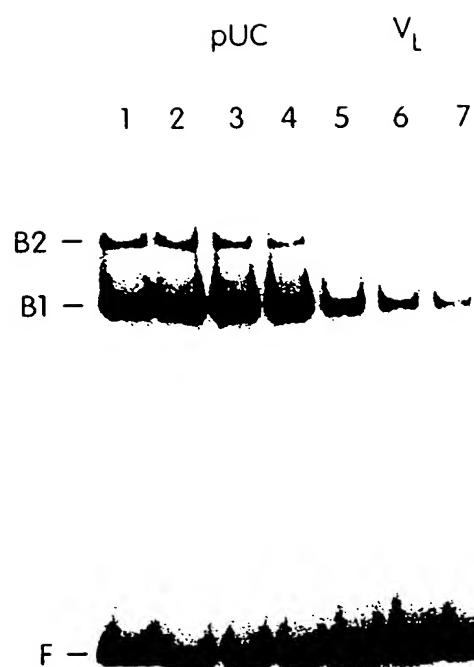
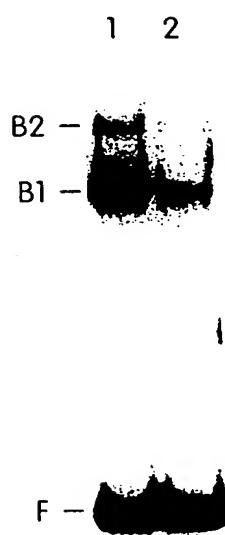


Fig. 2A



HeLa
Fig. 2B

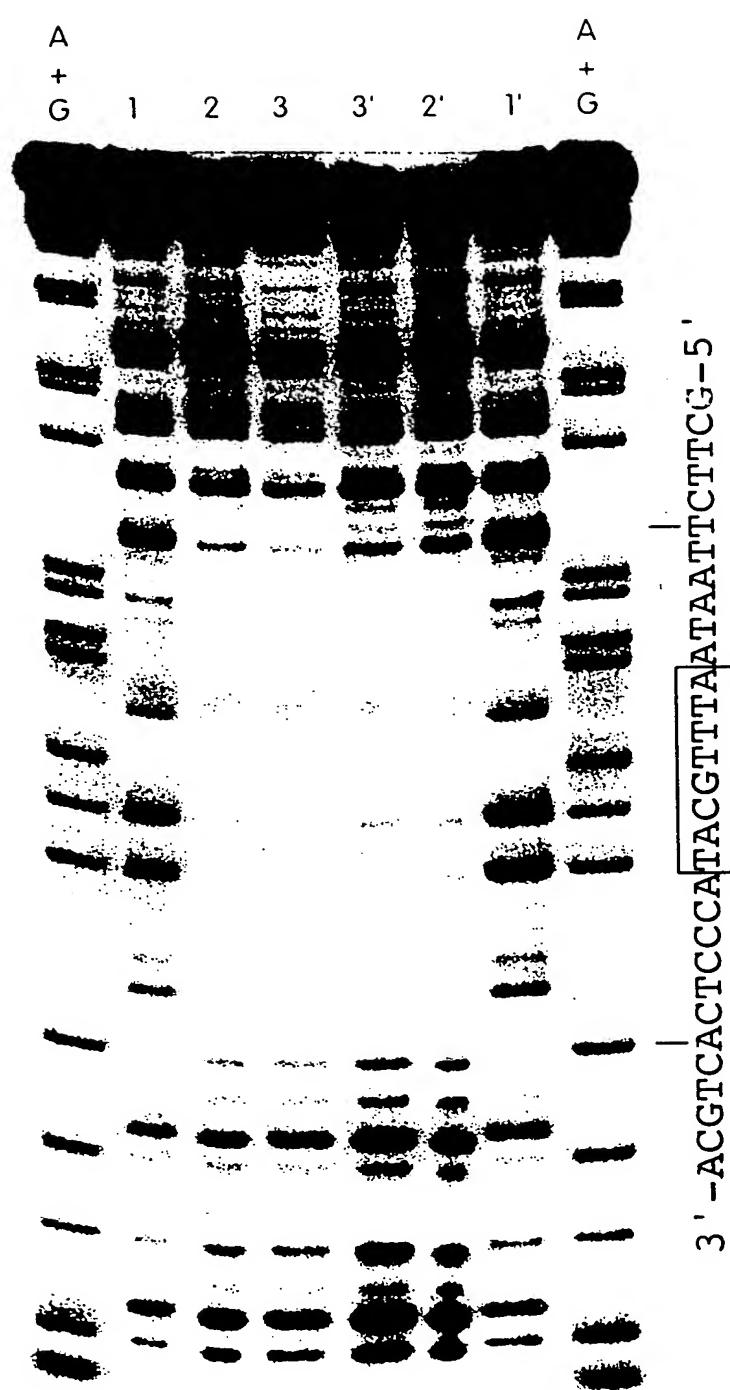


Fig. 3

V_L coding strand (-66)	*	TCTTAATA ATTTGCAT ACCCTCAC
V_H non-coding strand (-50)	*	CGCACATG ATTTGCAT ACTCATGA
$J_H - C_H$ coding strand (166)		CCTGGGTA ATTTGCAT TTCTAAAA

Fig. 4A

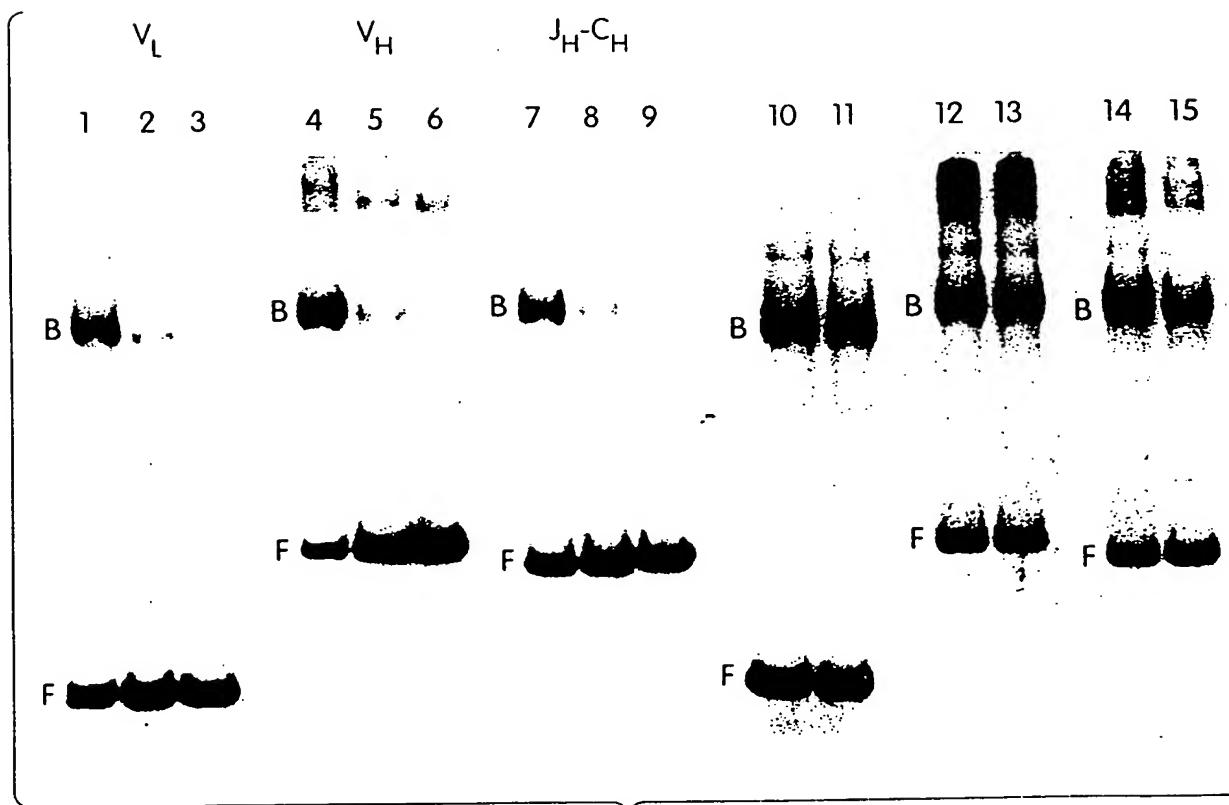


Fig. 4B

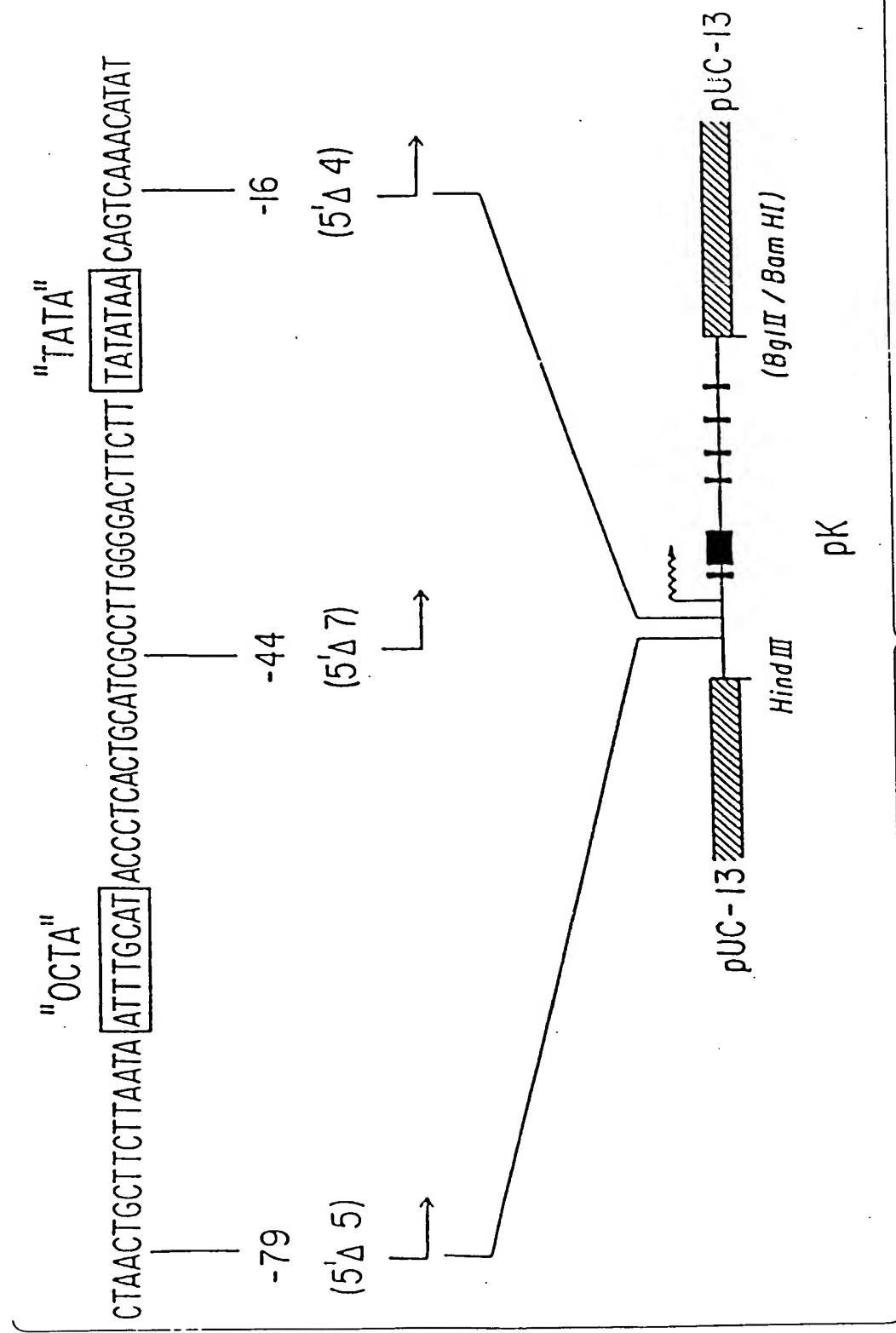


Fig. 5A

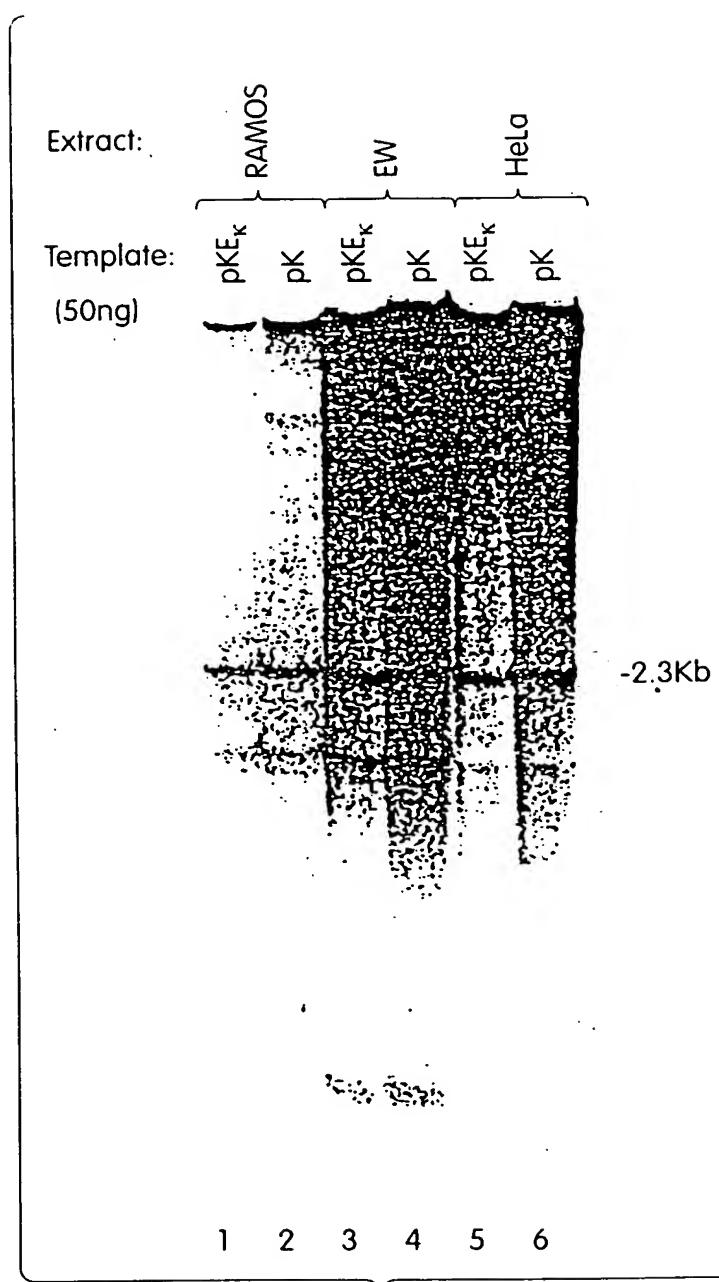


Fig. 5B

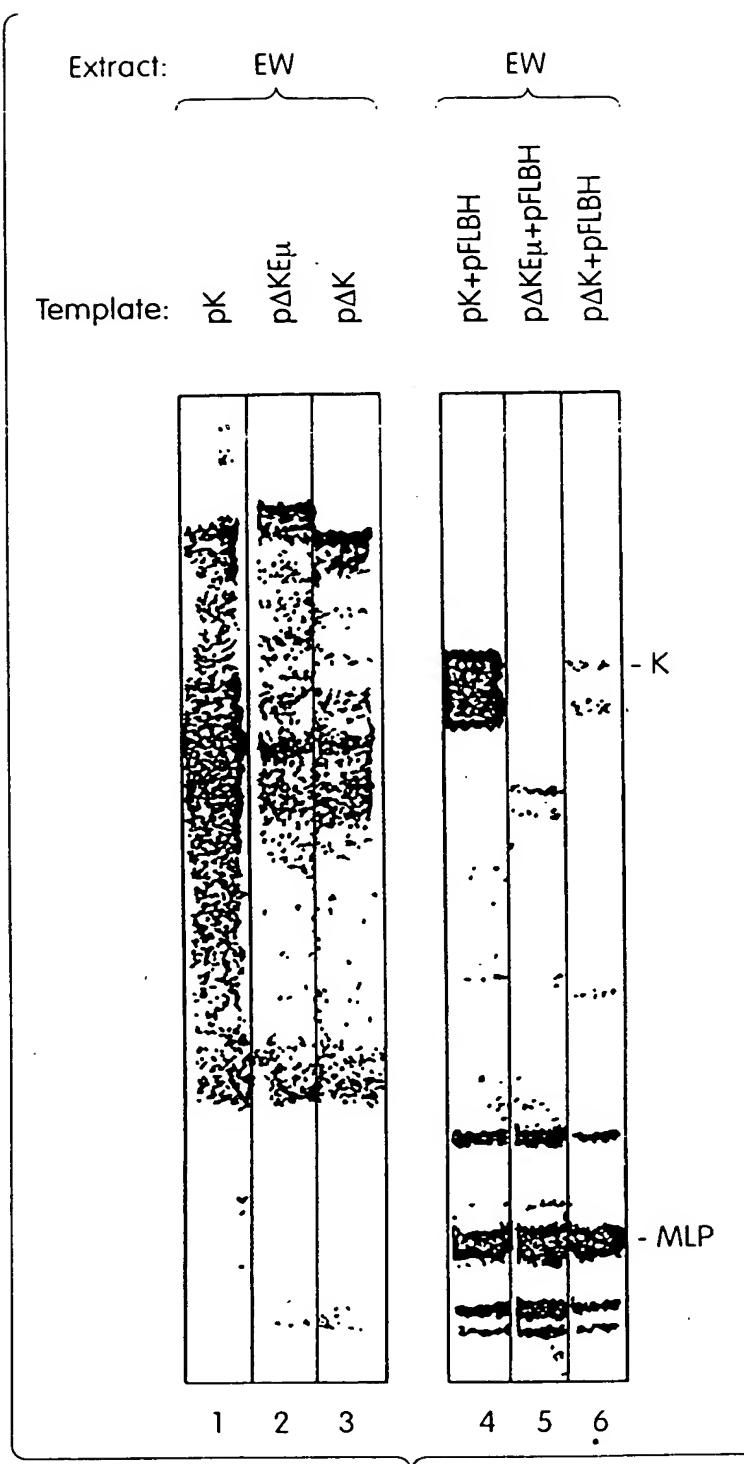


Fig. 6

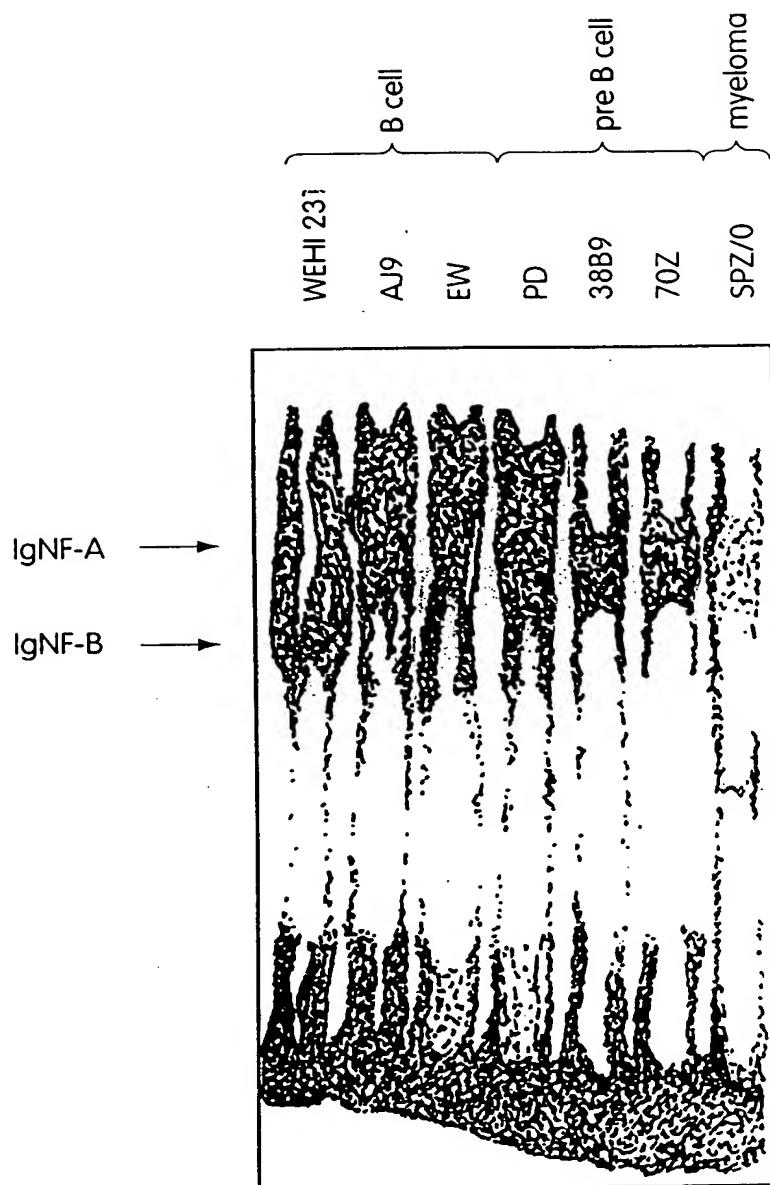


Fig. 7

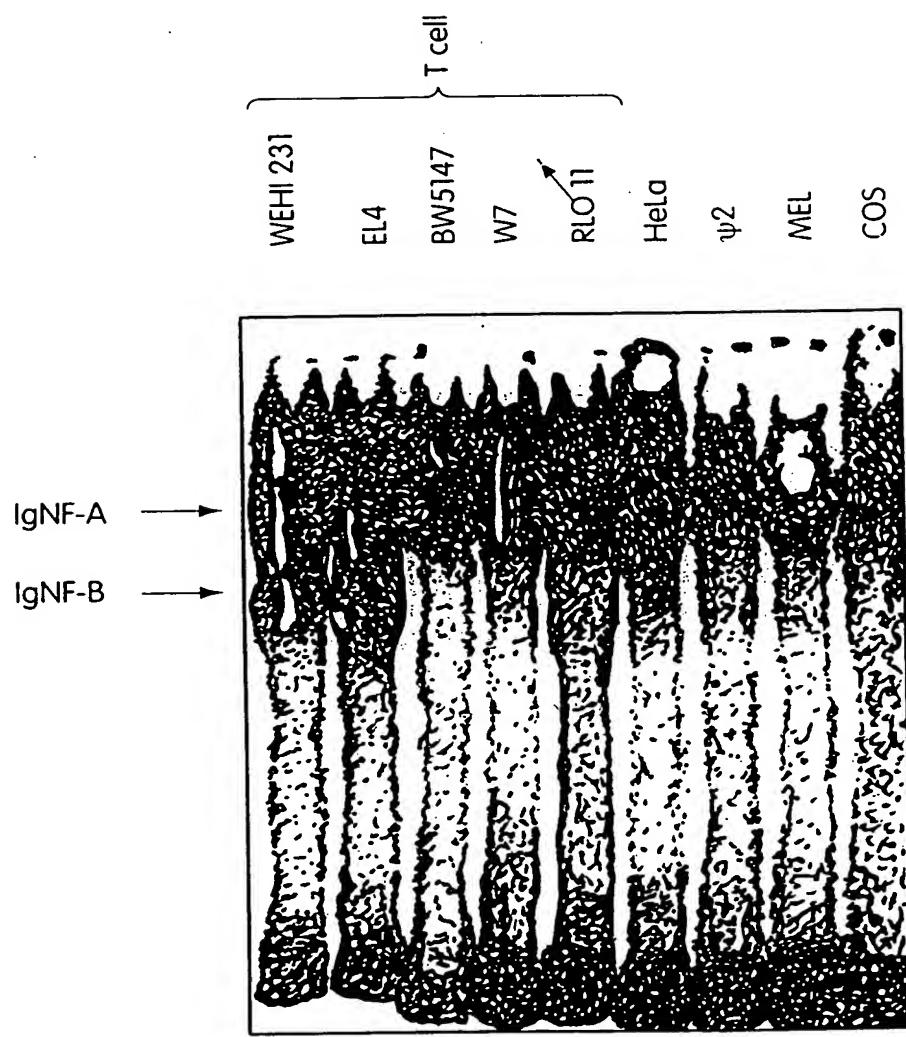


Fig. 8

Figure 9A

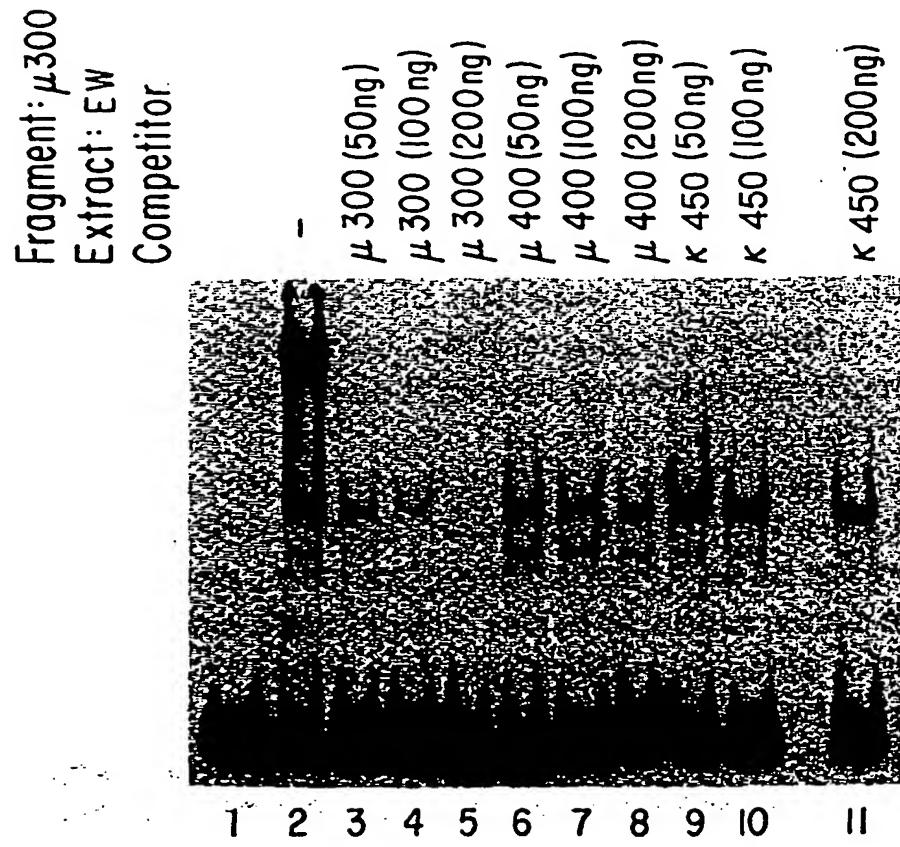
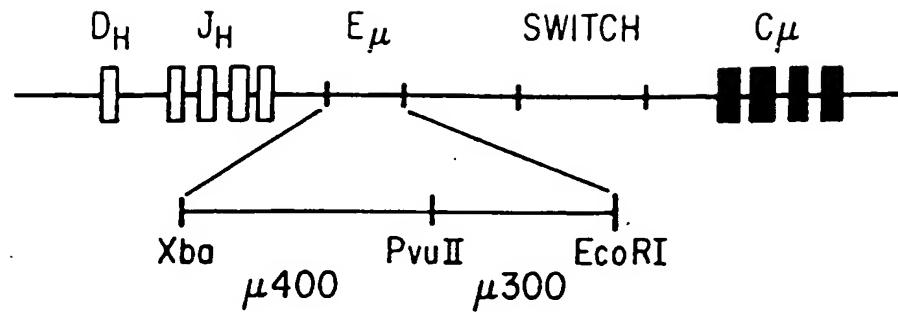


Figure 9B

Figure 10A

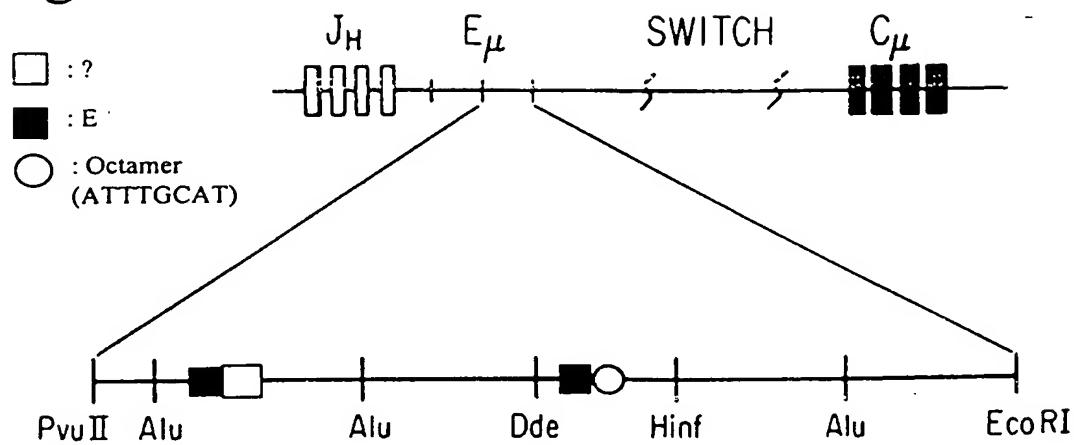
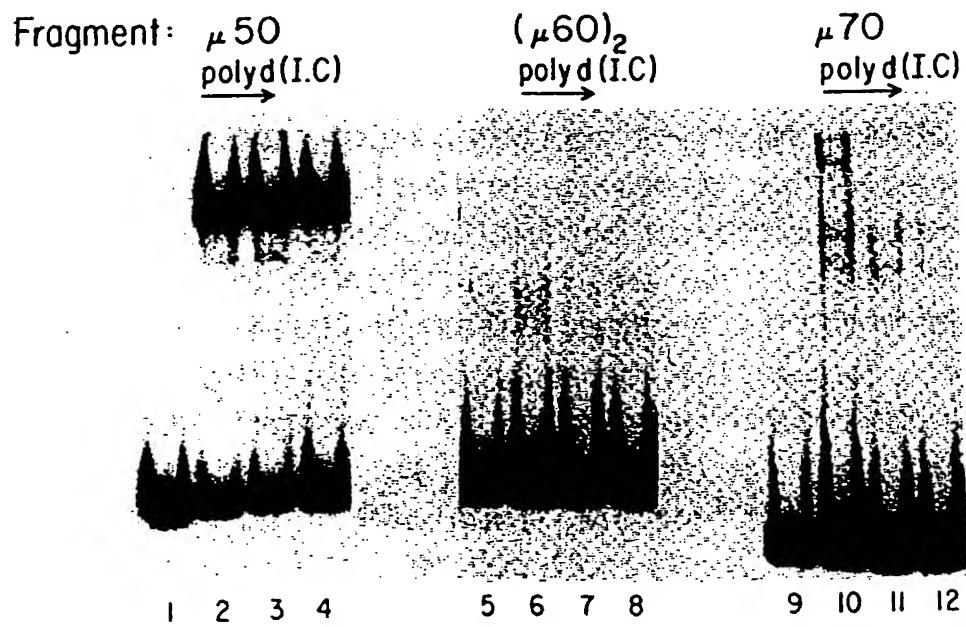


Figure 10B



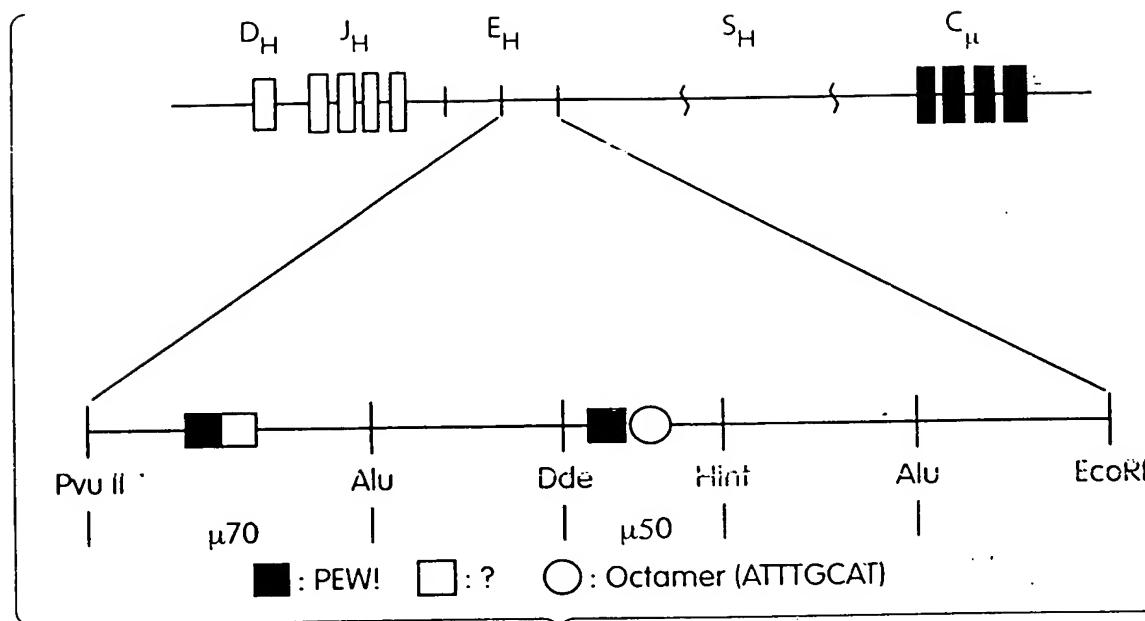


Fig. 10C

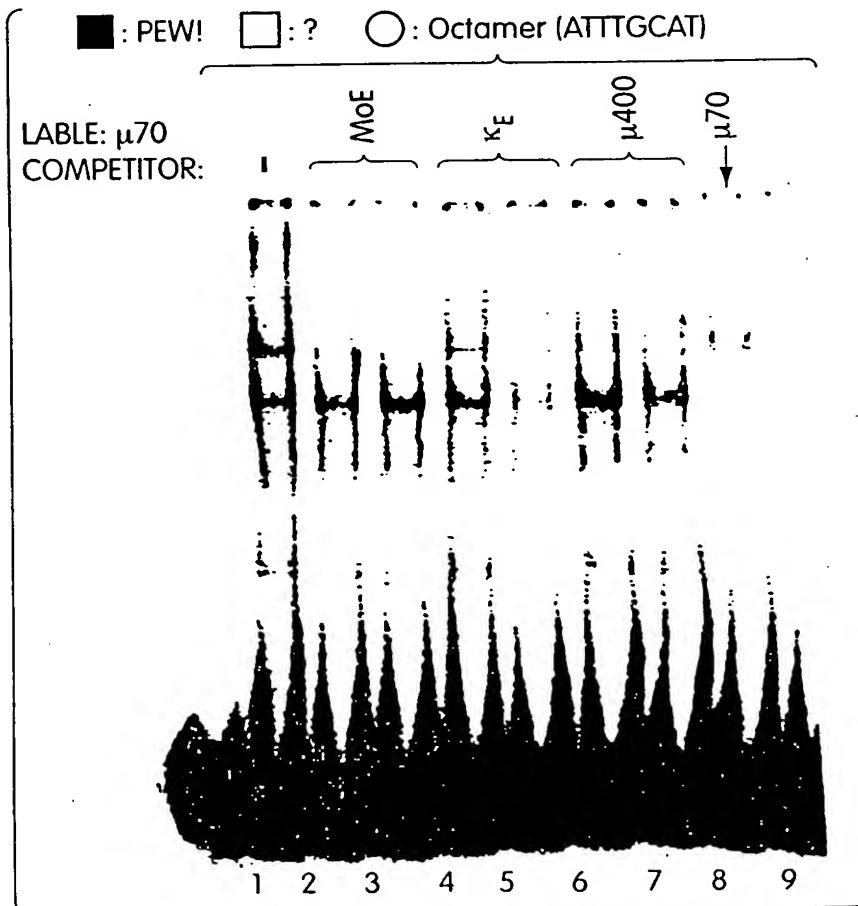


Fig. 10D

Figure 10E

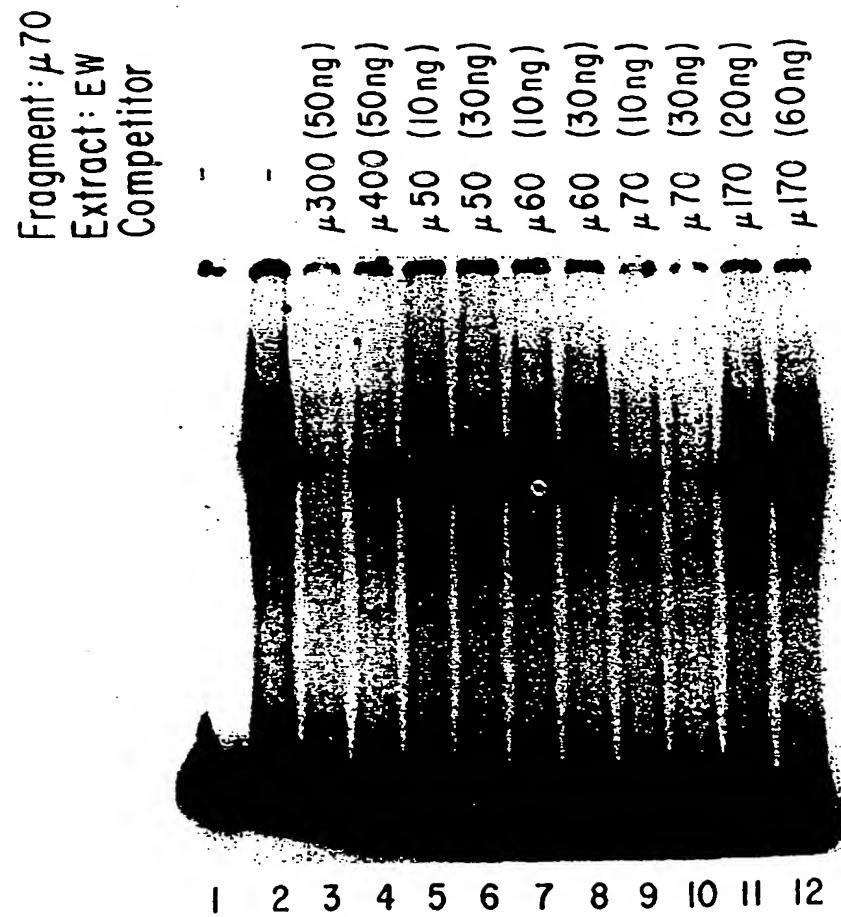


Figure 11A



Figure 11B



μ 50: AATTACCCAGGTGGTGTTC^{○○}
TTAATGGGTCCACCACAAACG^{●○}

μ 70: AGCAG[○]GT[○]CAT[○]GT^{●○}GCAAGGCTA
TCGTCCA[○]TACACC[○]TTCCGAT^{●○}

Fig. 11C

Figure 12A

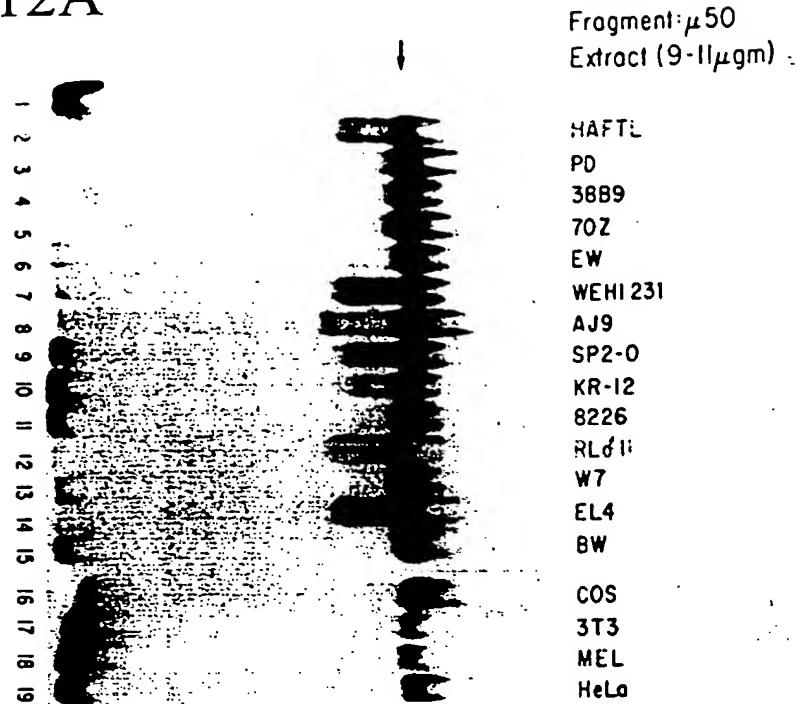


Figure 12B

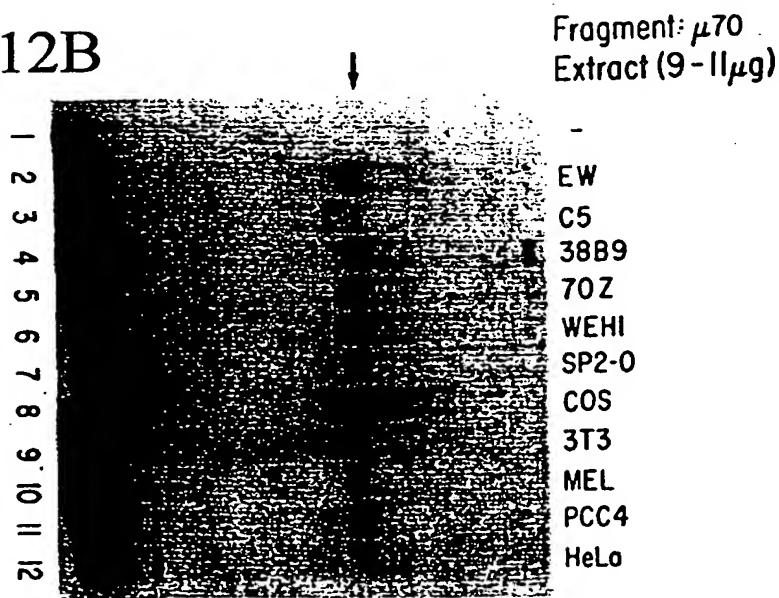


Figure 13A

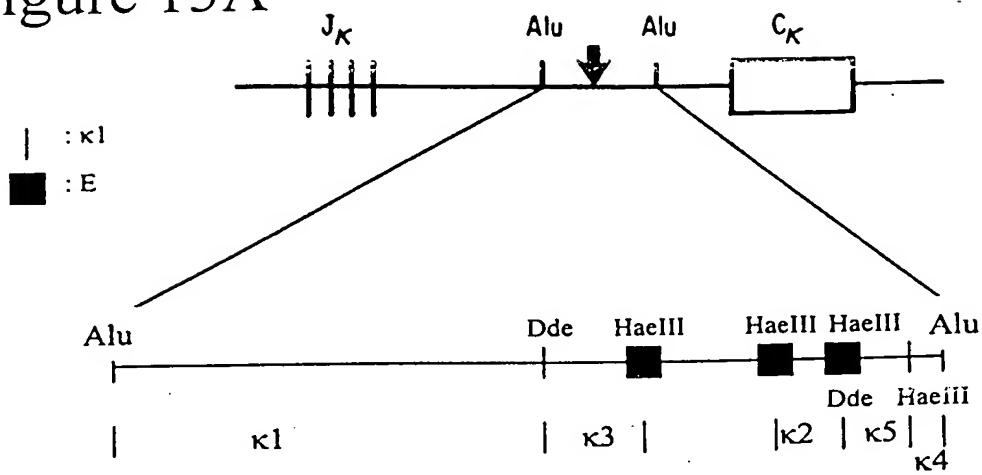


Figure 13B

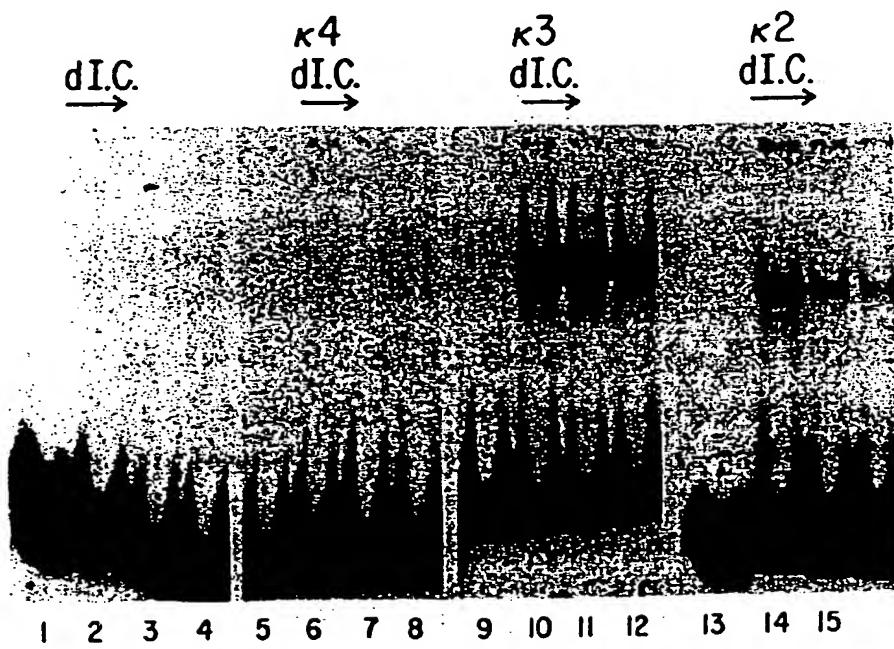


Figure 13C

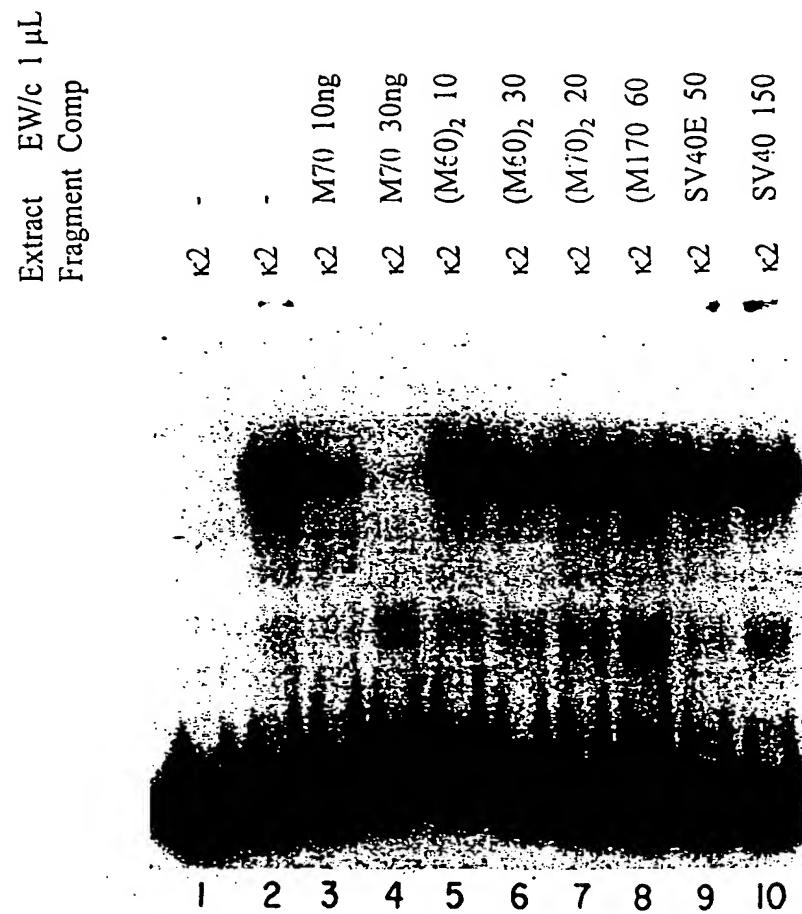
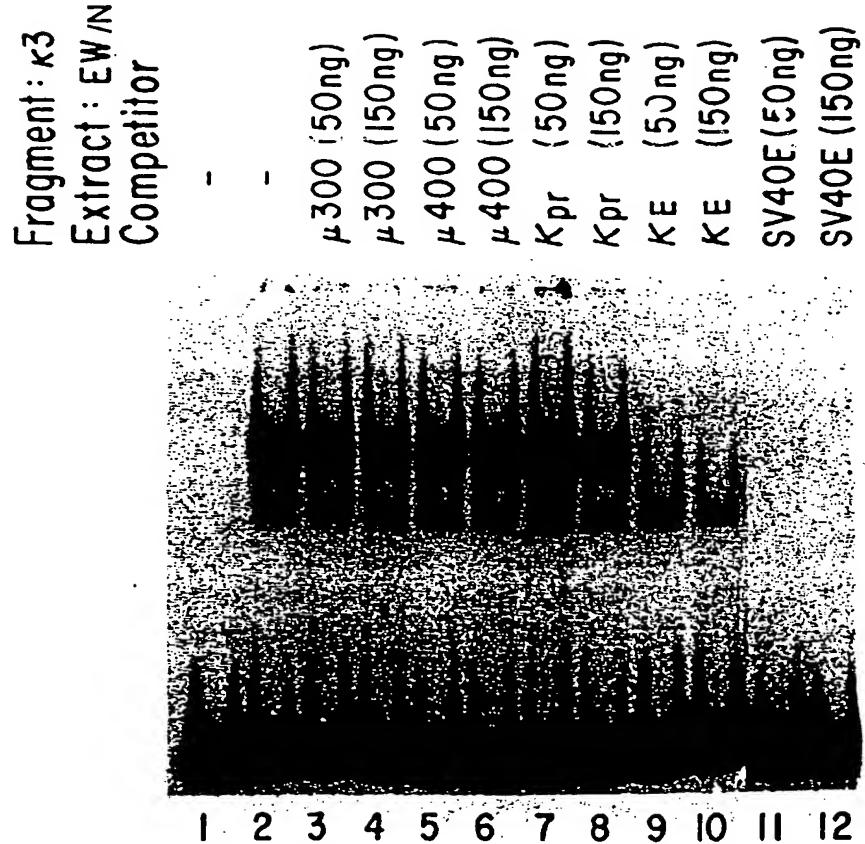


Figure 13D



Fragment: κ -3 / Dde*
Extract



Figure 14

COPY OF PAPERS
ORIGINALLY FILED

Figure 15A

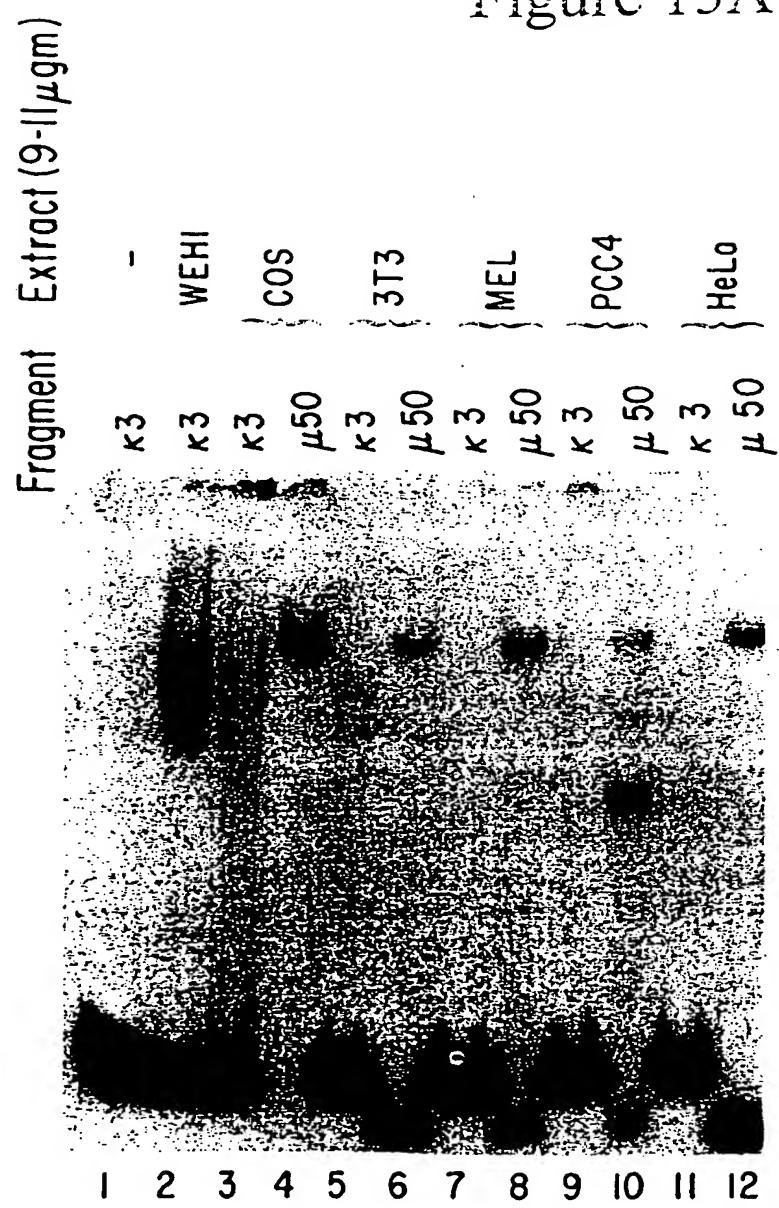
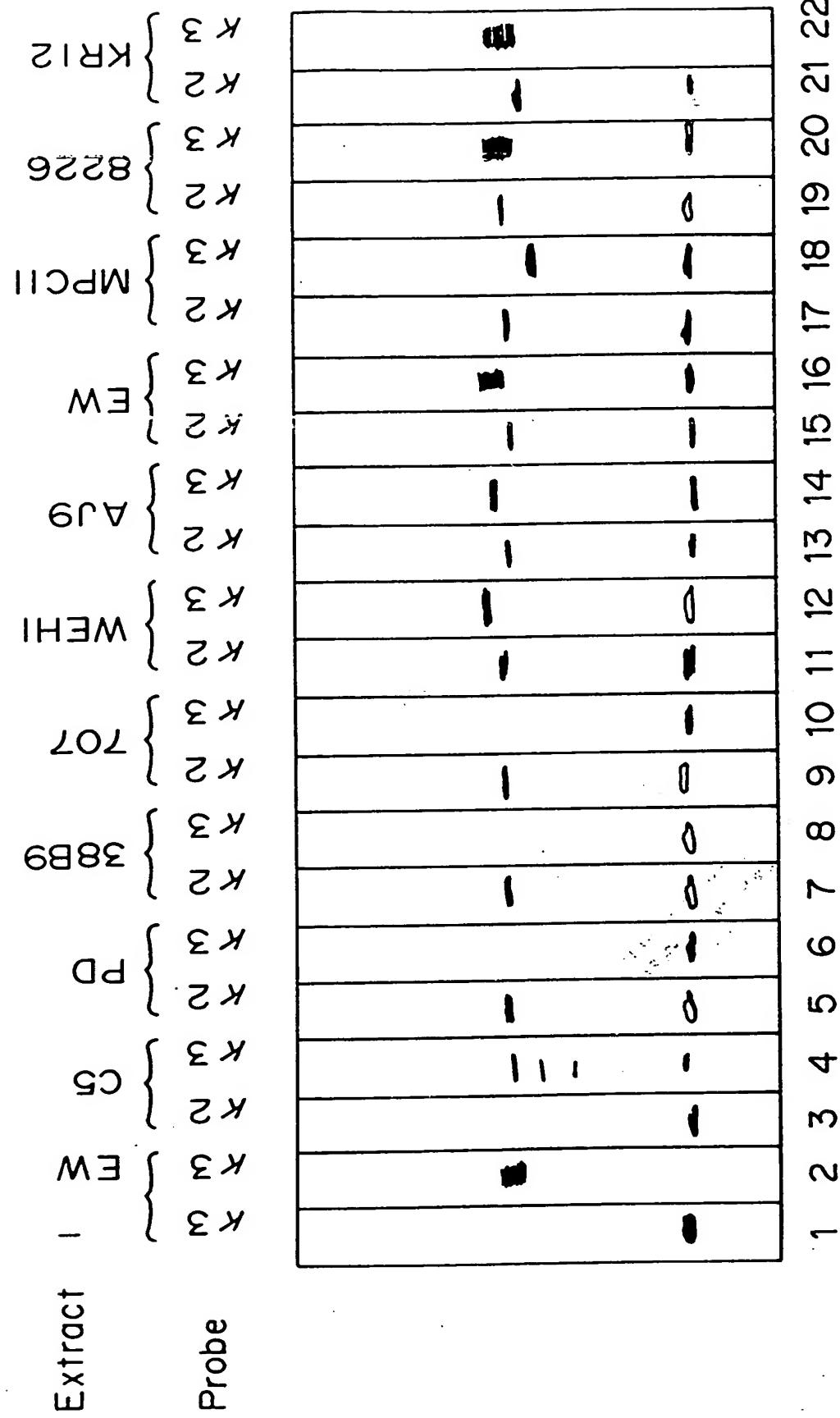


FIGURE 15b



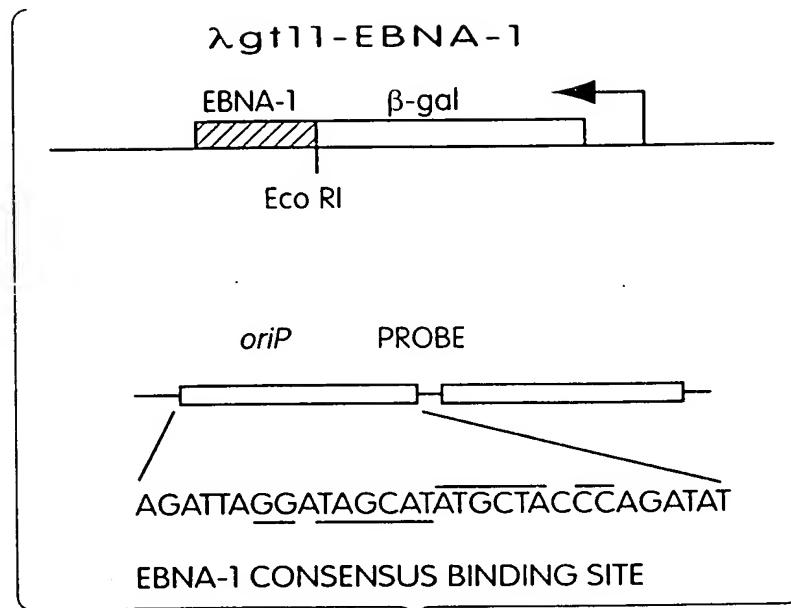


Fig. 16

MHC	TGGGGATTCCCCA
<i>mhc1</i>	TGcGGATTCCCCaA
κ EN	aGGGGACTttCCg
κ en	aaattAcTttCCg
SVEN	TGGGGAcTttCCA
HIV	TGGGGAcTttCCA
	aaGGGAcTttCCg

Fig. 17

1 CTGGGGCCCCCAGAGAGGGTGGGGAGATGACACAGTTCCCCCAGCCCTGGCGGGCG
 61 GGCAGCATGGTCACTCCAGCATGGGGCTCCAGAAATAAGAATGTCTAAGCCCTGGAG
 121 M V H S S M G A P E I R M S K P L E
 181 GCGAGAAGCAAGGTCTGGACTCCCCATCAGAGCACACAGACACCGAAAGAAATGGACCA
 241 A E K Q G L D S P S E M T D T E R N G P
 301 GACACTAATCATCAGAACCCCCAAAATAAGACCTCCCCATTCTCCGTGTCCCCAACTGGC
 361 D T N H O N P Q N R T S P F S V S F T G
 421 CCCAGTACAAAGATCAAGGCTGAAGACCCCAGTGGCGATTAGCCCCAGCAGCACCCCTG
 481 P S T K I K A E D P S G D S A P A A P L
 541 CCCCTCAGCCGGCCCAGCCTCATCTGCCCAAGGCCAACTCATGTTGACGGCAGCCAG
 601 P P Q P A Q P N L P Q A Q L M L T G S Q
 661 CTAGCTGGGACATACAGCAGCTCCAGCTCCAGCAGCTGGTGCTGTGCCAGGCCAC
 721 CACCTCCAGCCACCTGCTCAGTTCTGCTACCGCAGGCCAGAGGCCAGGCCCTG
 481 L A G D I Q Q L L Q L Q Q L V L V P G H
 421 H L Q P P A Q F L L P Q A Q Q S Q P G L
 481 CTACCGACACAAATCTATTCCAGCTACCTCAGCAAACCCAGGGAGCTCTCTGACCTCC
 541 L P T P H L F Q L P Q Q T Q G A L L T S
 601 CAGCCCCGGGCCGGCTTCCCACACAGGCCGTGACCCGCCCTACGCTGCCGACCCGCAC
 661 Q P R A G L P T Q A V T R P T L P D P H
 721 CTCTCGCACCGCAGCCCCAAATGCTGGAGCCACCATCCCACCCAGGGAGGCCAGT
 601 L S H P Q P P K C L E P P S H P E E P S
 661 GATCTGGAGGAGCTGGAGCAATTGGCCCGACCTCAAGCAACGCCGCATCAAGCTGGC
 721 D L E E L E Q F A R T F K Q R R I K L G
 601 TTCACCGAGGGTGATGTGGCCCTGGCCATGGCAAGCTCTACGCCAACGACTTCAGCCAG
 661 F T Q G D V G L A M G K L Y G N D F S Q
 721 C G P G H G Q A L R Q R L Q P D

Fig. 18A

ACGACCATTCCCGCTTCGAGGCCCTAACCTGAGCTCAAGAACATGTGCAAACCTCAAG
 781 T T I S R F E A L N L S F K N M C K L K
 D H F P L R G P Q P E L Q E H V Q T Q A

CCCCTCCTGGAGAAGTGGCTAACGATGCAGAGACTATGTCTGTGGACTCAAGCCTGCC
 841 P L L E K W L N D A E T M S V D S S L P
 F P G E V A Q R C R D Y V C G L K P A Q

AGCCCCAACCAACCAGCTGAGCAGCCCCAGCCTGGGTTTCGAGCCTGCCGGCCGGAGACGCAAG
 901 S P N O L S S P S L G F E P A G R R R K
 P Q P A E Q P Q P G F R A C M P E T Q E

AAGAGGACCAGCATCGAGACAAACGTCCGCTTCGCCTTAGAGAAGAGAGTTTCTAGCGAAC
 961 K R T S I E T N V R F A L E K S F L A N
 E D Q M R D K R P L R L R E E F S S E P

CAGAAGCCTACCTCAGAGGAGATCCTGCTGATGCCGAGCAGCTGCACATGGAGAAGGAA
 1021 Q K P T S E E I L L I A E Q L H M E K E
 E A Y L R G D P A D R R A A A H G E G S

GTGATCCGGTCTGGTTCTGCAACCGGCCCCAGAAGGACAAACGCATCAACCCCTGCAGT
 1081 V I R V W F C N R R Q K E K R I H P C S
 D P R L V L Q P A P E G E T H Q P L Q C

GCGGCCCATGCTGCCAGCCCAGGGAAAGCCGCCAGCTACAGCCCCATATGGTCACA
 1141 A A P M L P S P G K P A S Y S P H H V T
 G P H A A Q P R E A G Q L Q P P Y G H T

CCCCAAGGCGGGCGGGGACCTTACCGTTCTCCAAGCTCCAGCAGTCTGAGCACAACA
 1201 P Q G G A G T L P [L] S Q A S S S [L] S T T
 P A G R G D L T V V P S F Q Q S E H N S

Fig. 18A
(CONTINUED)

1261 GTTACTACCTTATCCTCAGCTGTGGGACGCTCCACCCAGCCGGACAGCTGGAGGGGGT
 V T T [L] S S A V G T [L] H P S R T A G G G
 Y Y L I L S C G D A P P Q P D S N M G W

 1321 GGGGGCGGGGGCGGGGCTGCGCCCCCCCTCAATTCCATCCCCCTCTGTCACTCCCCCACCC
 G G G G G A A P P L N S I P S V T P P P
 G M G R G C A P P Q F H P L C H S P T P

 1381 CGGCCACCAACACAGCACAAACCCAGCCCTCAAGGCAGCCACTCGGCTATCGGCTTG
 P A T T N S T N P S P Q G S H S A I G L
 G H N Q Q H K P Q P S R Q P L G Y M L V

 1441 TCAGGCCTGAACCCCAGCACGGGTAAGTGGTGCACGTGGAAAGCTGTGGGAGAAGCA
 S G L H P S T G +
 A P E P Q N G V S G C T W E A V G R S R

 1501 GCGTCGCTGCTCTTCTAGGGTGGGAGCGGCACCCAGTTATGTTGGCAGGTCCCTGCC
 V A A A S R V G S G T P V M L A G P C P

 1561 CCTGCTAATGCCTCTGCTTGCCTCTTGCAGAACGACAATGGTGGGTTGAGCTCCGGCT
 C +

 1621 GAGTCCAGCCCTCATGAGCAACAACCCCTTGGCCACTATCCAAGGTGCGTGCTGCCTCAT

 1681 GTCACACCCATCGTCACCAGCCCCGGAATTGAG

Fig. 18A
(CONTINUED)

CCTCAAGGCAGCCACTCGGCTATCGGCTTGTCAAGGCCTGAACCCCAGCACGGGCCCTGGC
 1411 P Q G S H S A I G L S G I N P S T G P G
 S A Q P L G Y R L V M P E P Q M G P N P

CTCTGGTGGAACCTGCCCTTACCGCCTTACCGCCTGGATGGCAGCGGGAAATCTGGTGCTGGGGC
 1471 L W W N P A P Y Q P .
 L V E P C P L P A L M A A G I W C W G Q

AGCCGGTGCAGCCCCGGGAGCCCTGCCCTGGTACCTGCCGCTCTTCTTGAATCATGC
 1531 P V Q P R G A L A W .

TGGGCTGCCCTGCTCAGCACCCGCCCTGGTGTGGCCTGGTCTCAGCAGCGGCTGC
 1591 GGG

TGTGGCAGCCTCCATCTCCAGCAAGTCTCCTGCCCTCCTCCTCATCCTCTTCATCCTC
 1651

ATCCTCCTCCTCCACTTGCAGCGAGACGGCAGCACAGACCCCTGGAGGTCCAGGGGG
 1711

CCCGAGGCAGGGTCAAACCTGAGTGAGGGCCAGCCATGCCTCCCTCCATTCCCTCTGG
 1771

TCCCTGCCCGGAATTTC
 1831

Fig. 18B

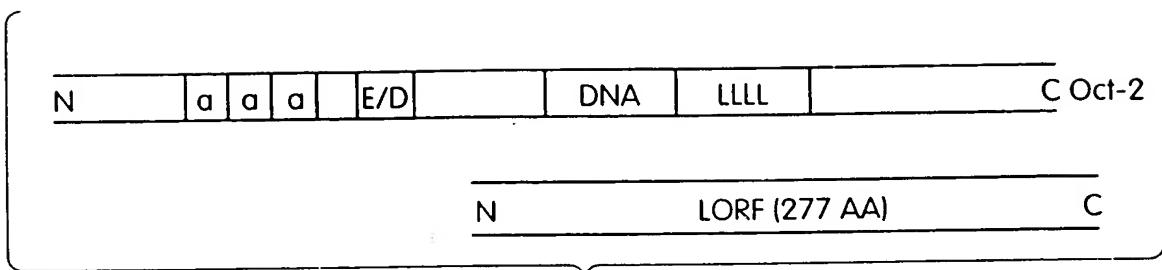


Fig. 18C

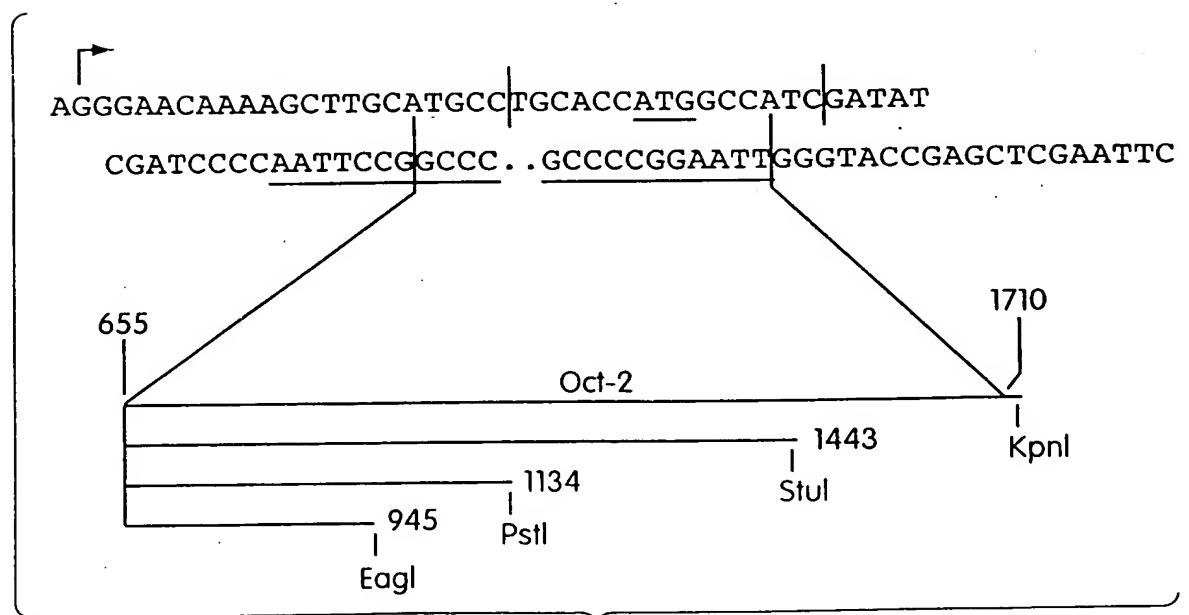


Fig. 19

	Oct-2	RRKKR K TSIETNVR A LEKSFLANQKPTSEEILLIAEQLHMEKEVIRVW EE ECNF Q KEKERINPC	helix	turn	helix
al	SPKGKSSISPQARAFLEQVFRKQSLNSKEKEEVAKKCGITPLQVRVWEINKBMRSK	*****	↔	↔	↔
2	KPYRGHRTKENVRILESWFAKNP Y LDTKGLENLMKNTSLSRIQIKN H VSNRBRKEKTIT	*****	↔	↔	↔
pho2	QRPK R TRAKGEALDV K RKF E INNPTPSLVERKKISDLIGMP E KVNR V RIWEONRBAKL R KKQ	*****	↔	↔	↔
mec-3	RRG P RTTIKQNQLDV N NEMFSNTPKPSKHARAKLAETG L SMRVIQVWEONR S KERRRLK	*****	↔	↔	↔
cut	SKKQ E VLFSEEQKEA L R A FALDP Y PNVGTIEFLANELGLATRTITN W EHNH M RLKQQV	*****	↔	↔	↔
en	EKR P TAFSSE Q QLARIKREFEN N RYLTERRRQQLSSELGLNEAQIKI E ONKRAKIKKST	*****	↔	↔	↔
Antp	RKR G EQTYTRYQ T LEKEFHFNR Y LTRRRRIIAHALCLTERQIKI E ONR R BMKWWKKEN	*****	↔	↔	↔
			ME	N	R
			L		
					(co res hom fam

Fig. 20

Figure 21A

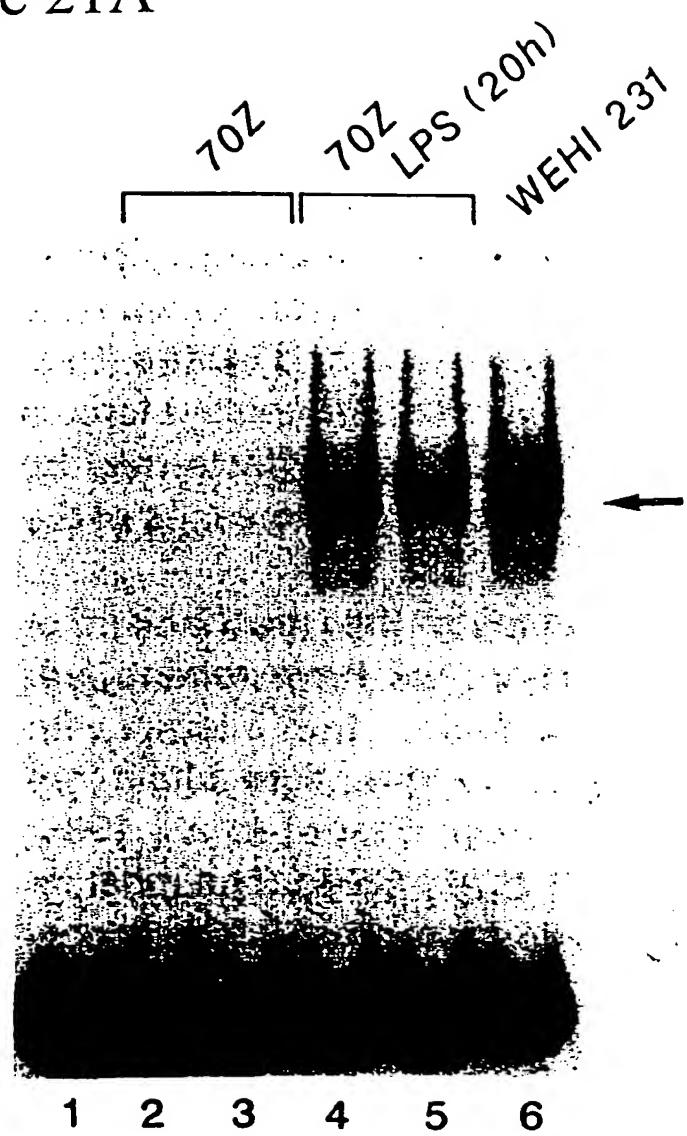


Figure 21B

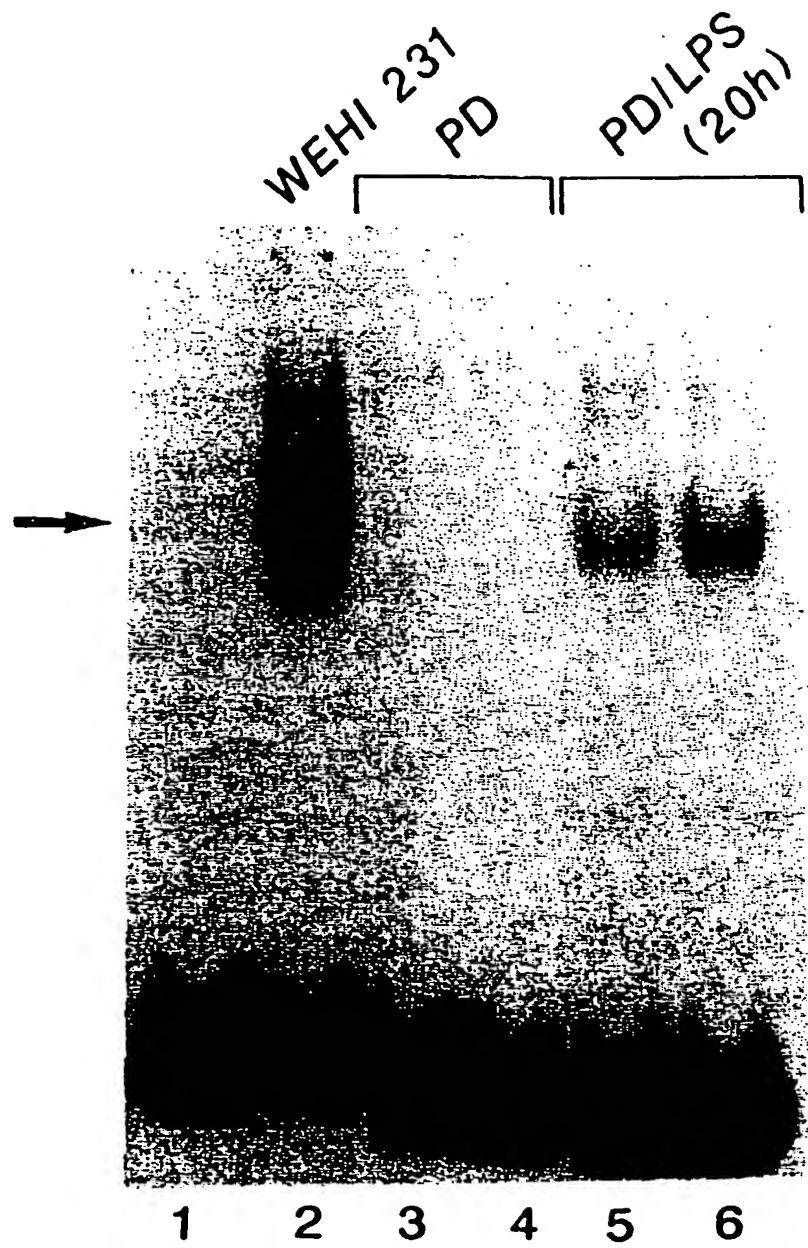


Figure 22A

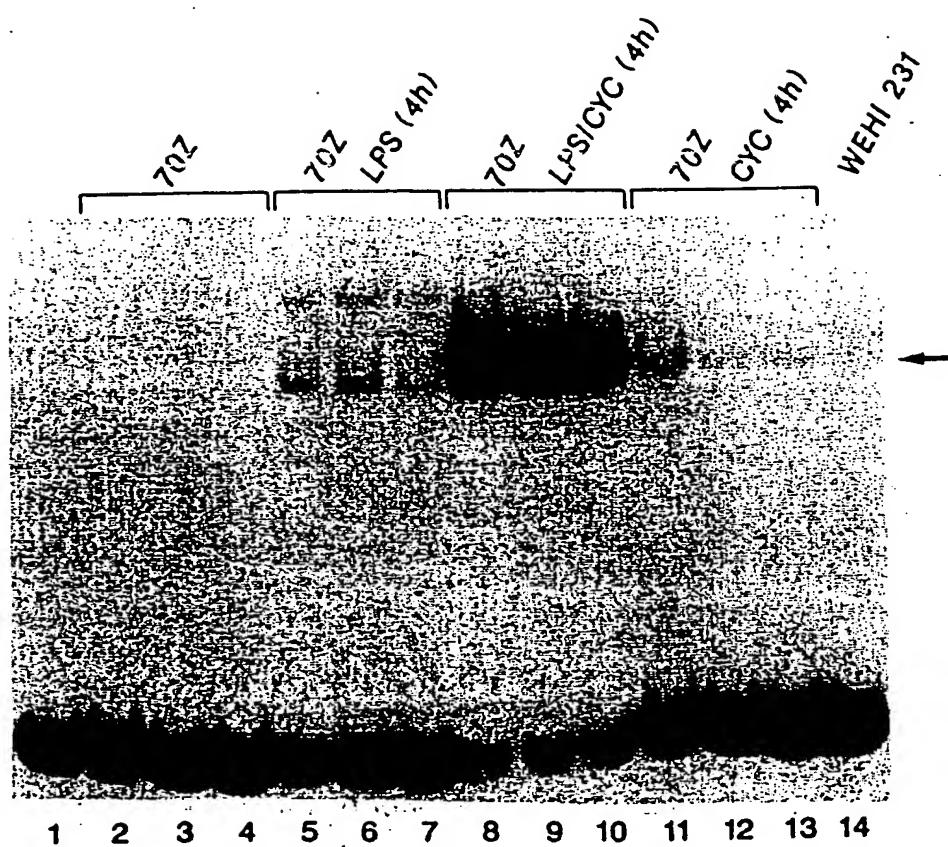


Figure 22B

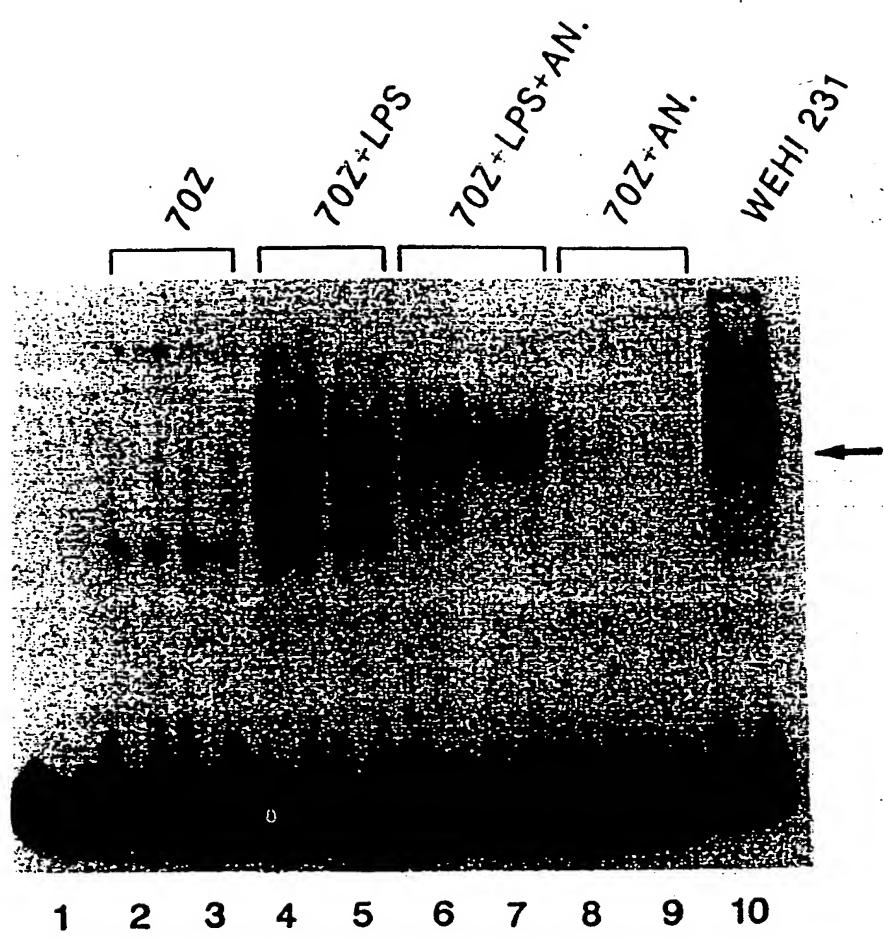


Figure 23A

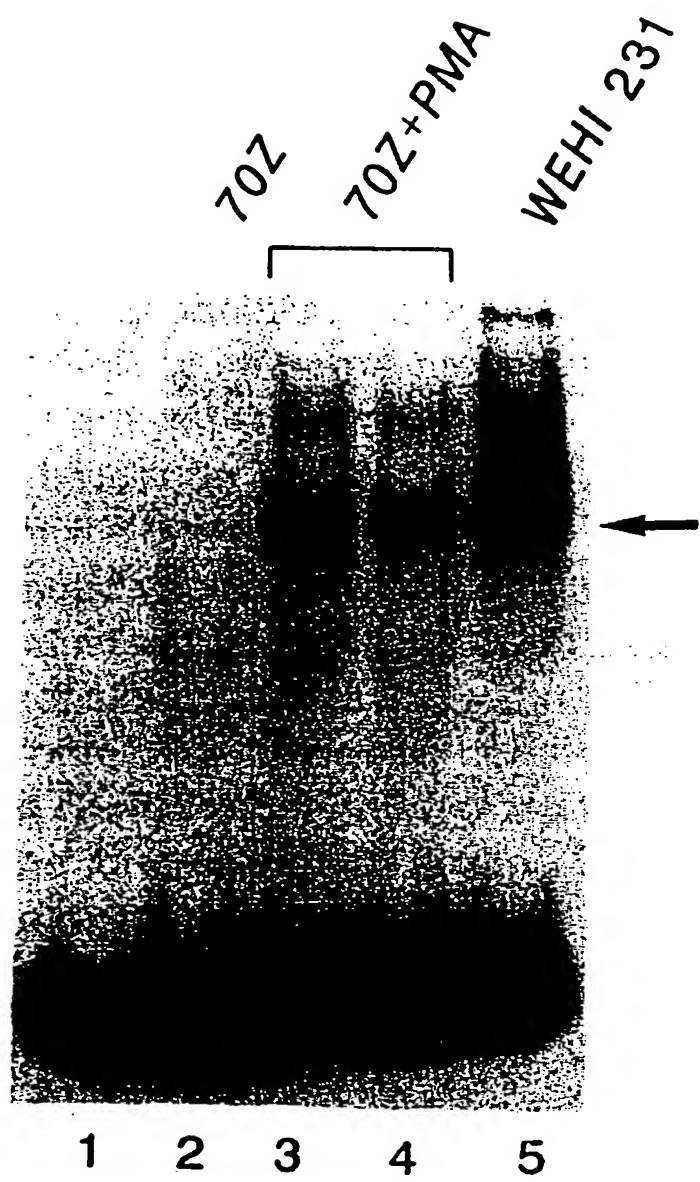


Figure 23B

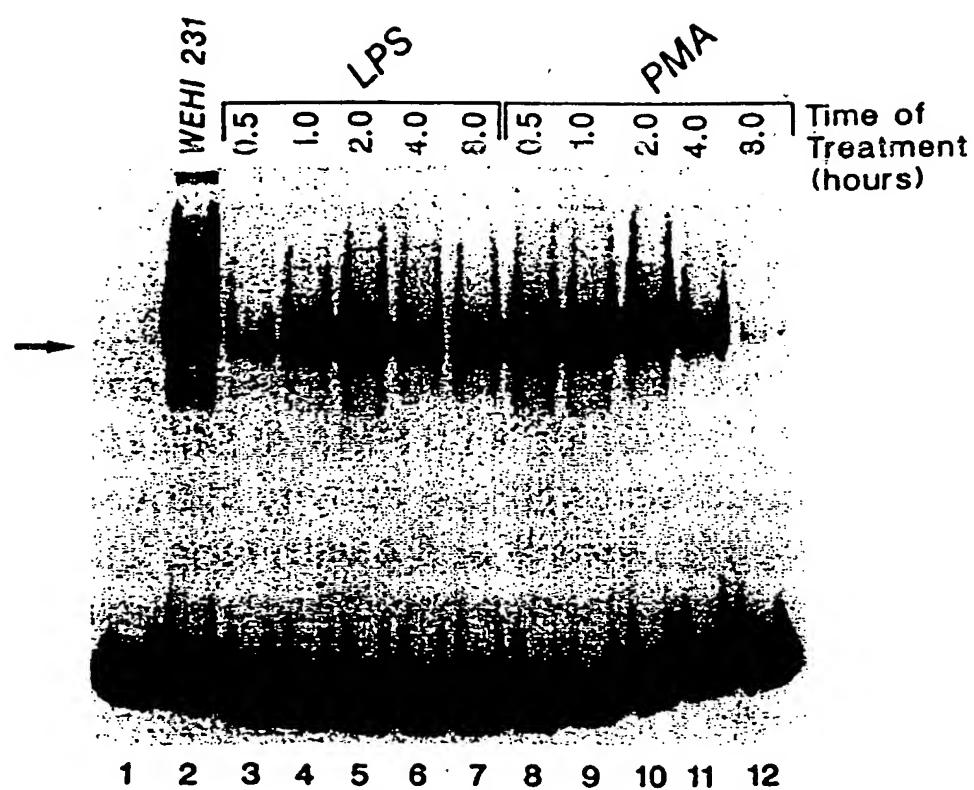


Figure 24A

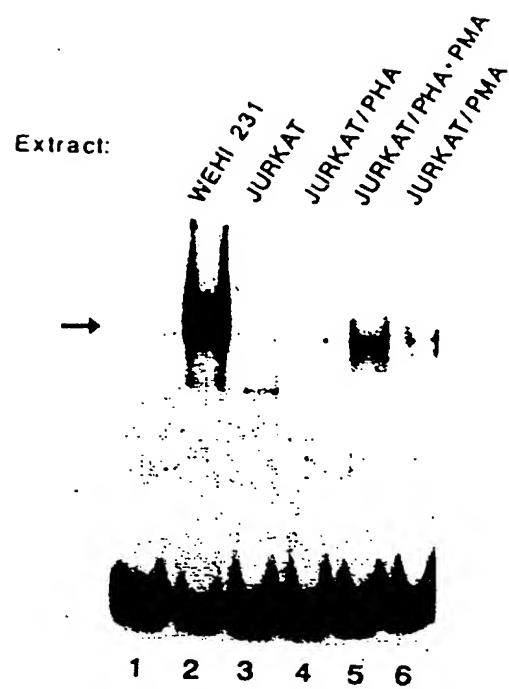


Figure 24B

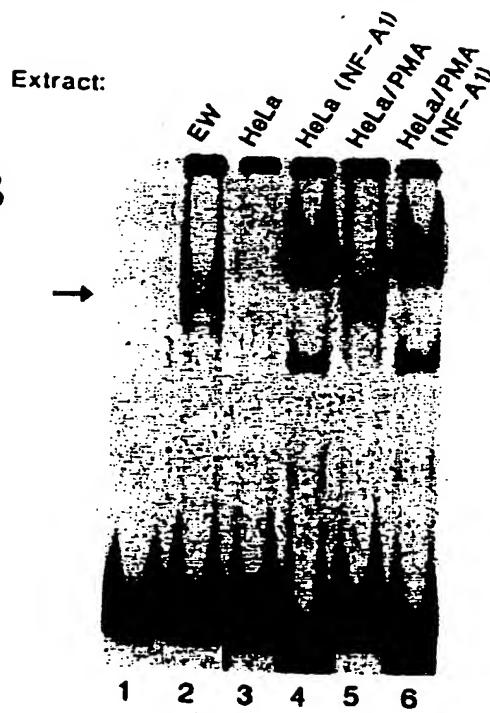
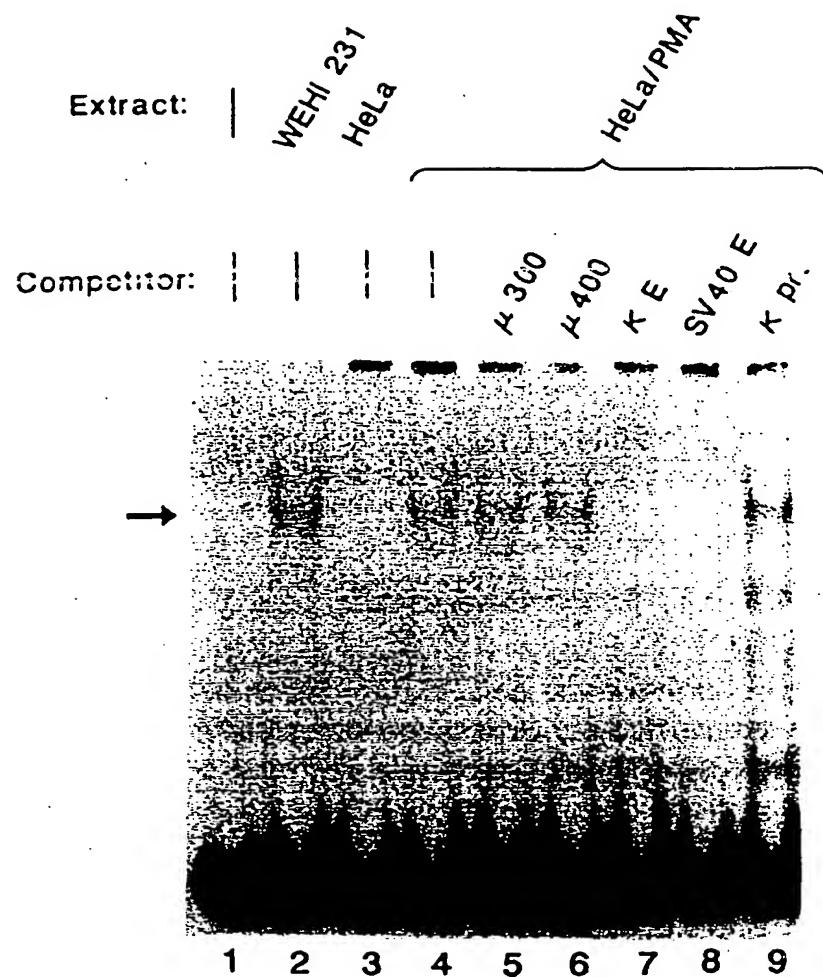


Figure 24C



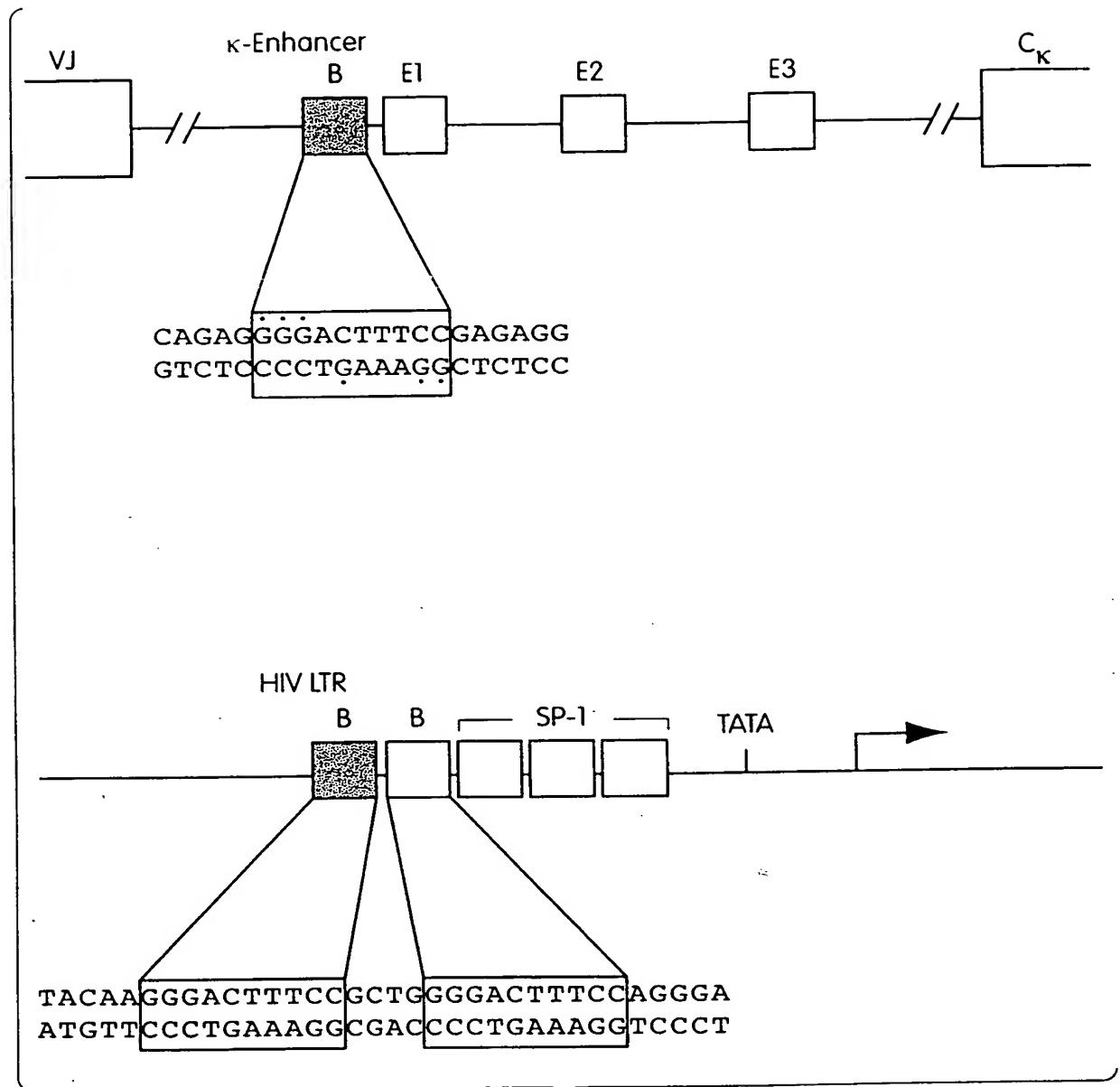


Fig. 25

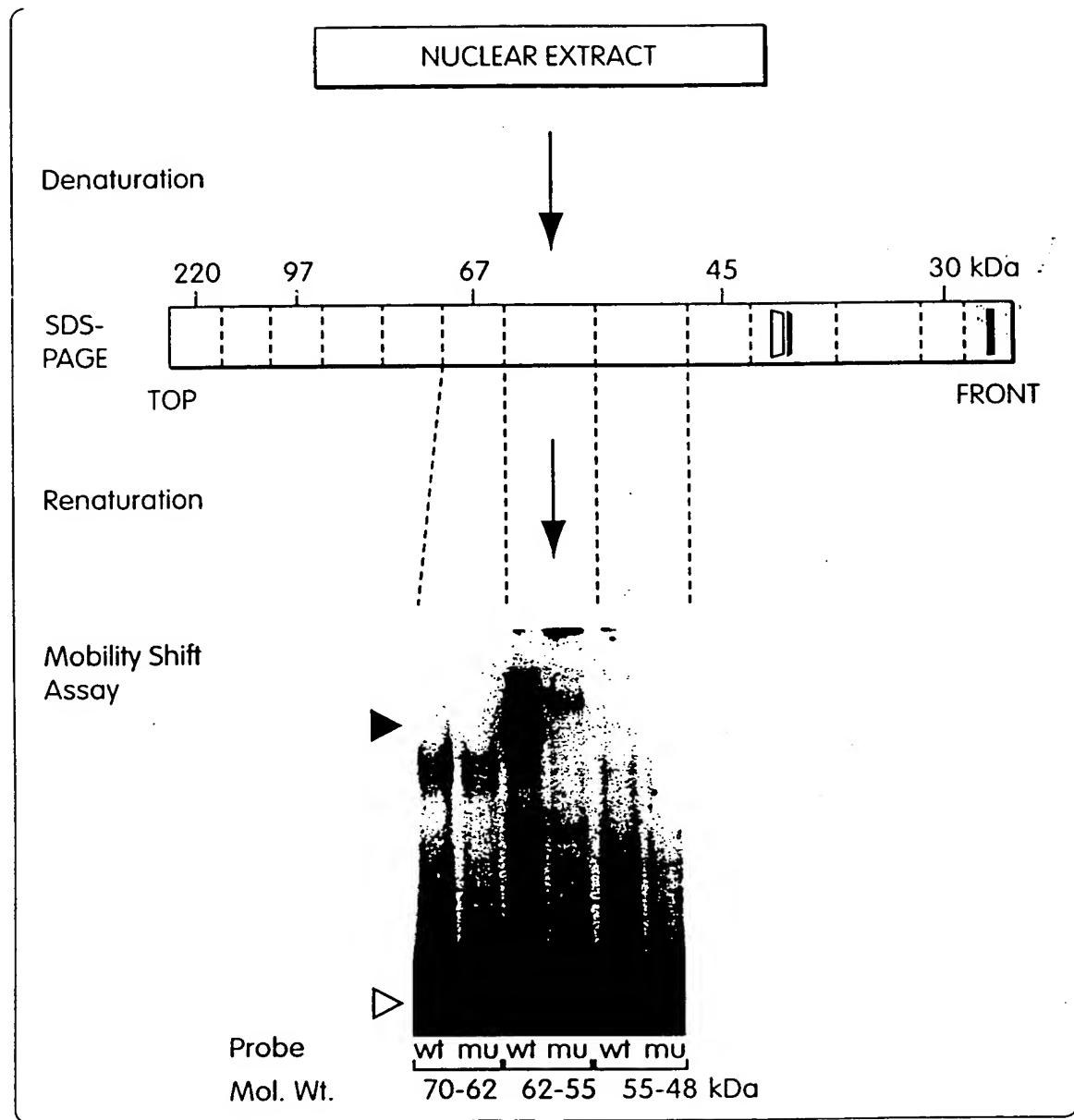


Fig. 26A

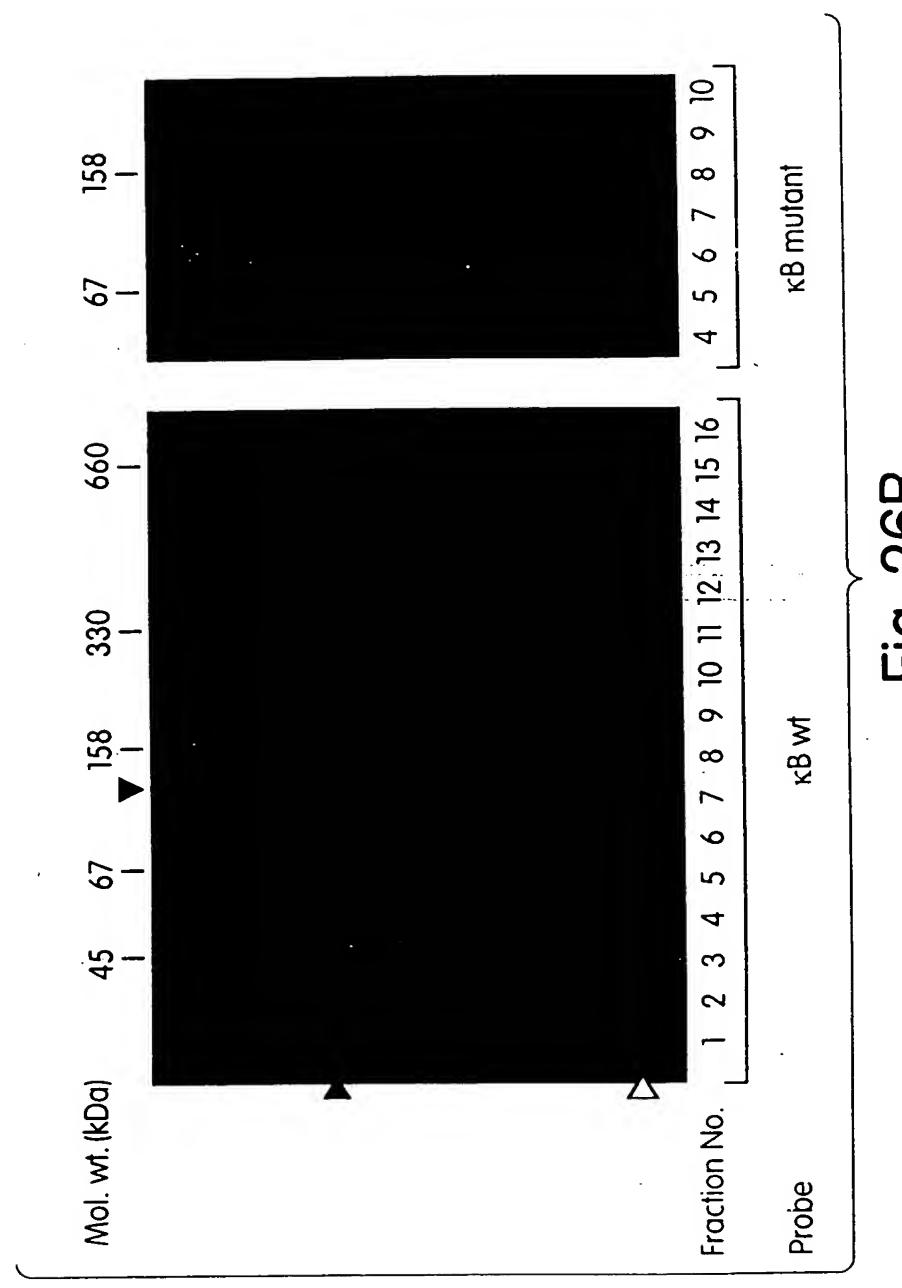


Fig. 26B

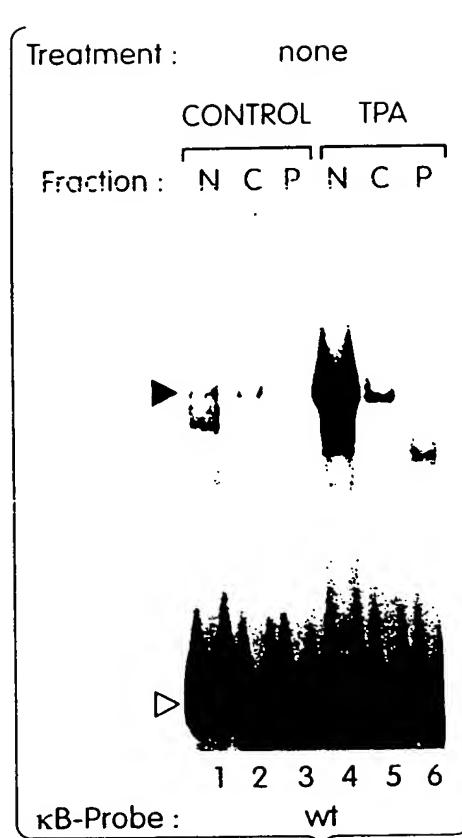


Fig. 27A

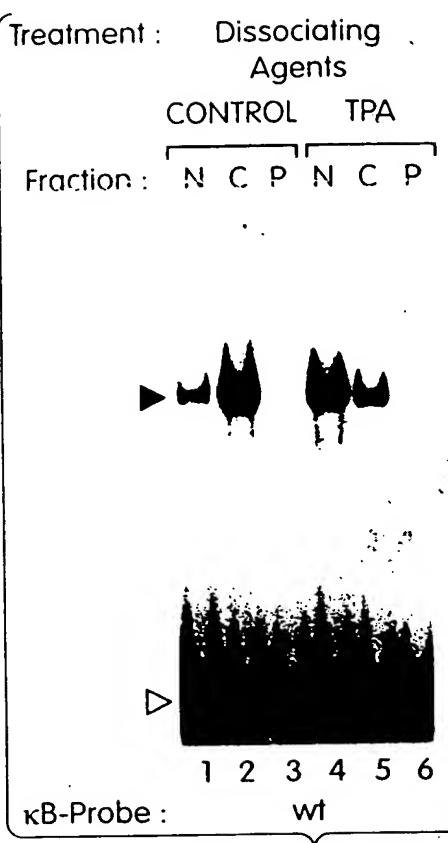


Fig. 27B

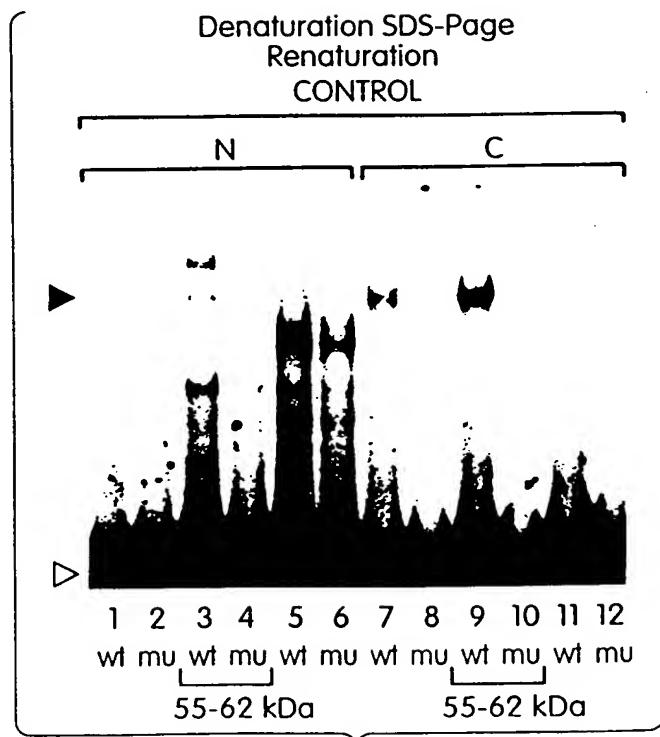


Fig. 27C

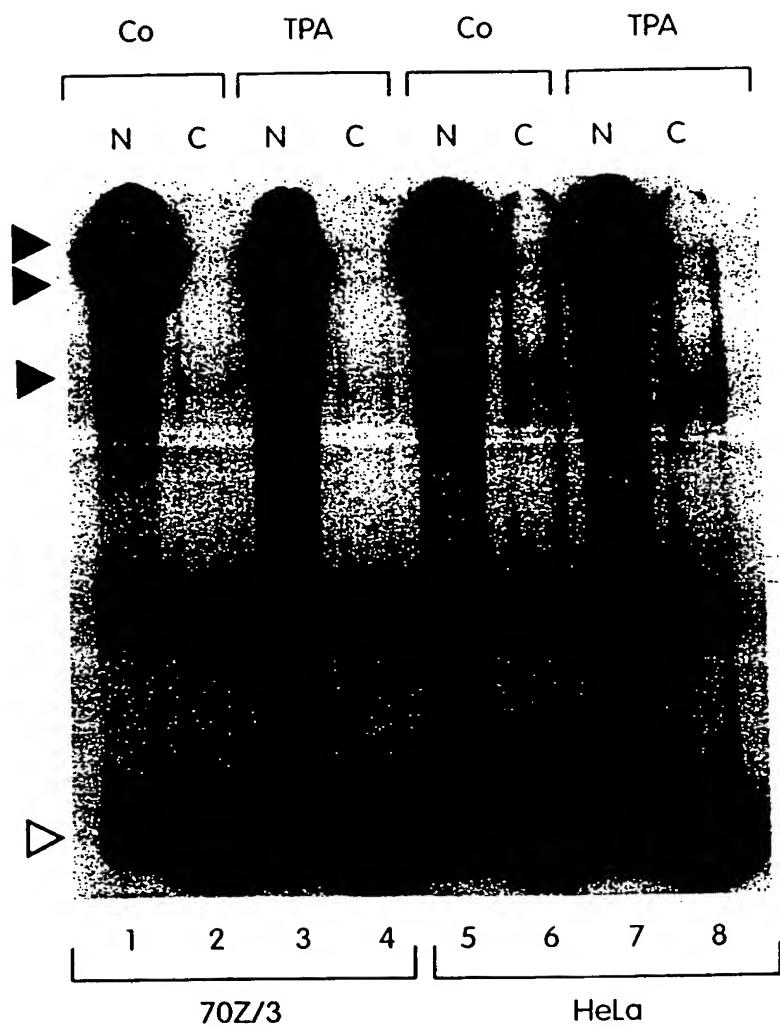


Fig. 28

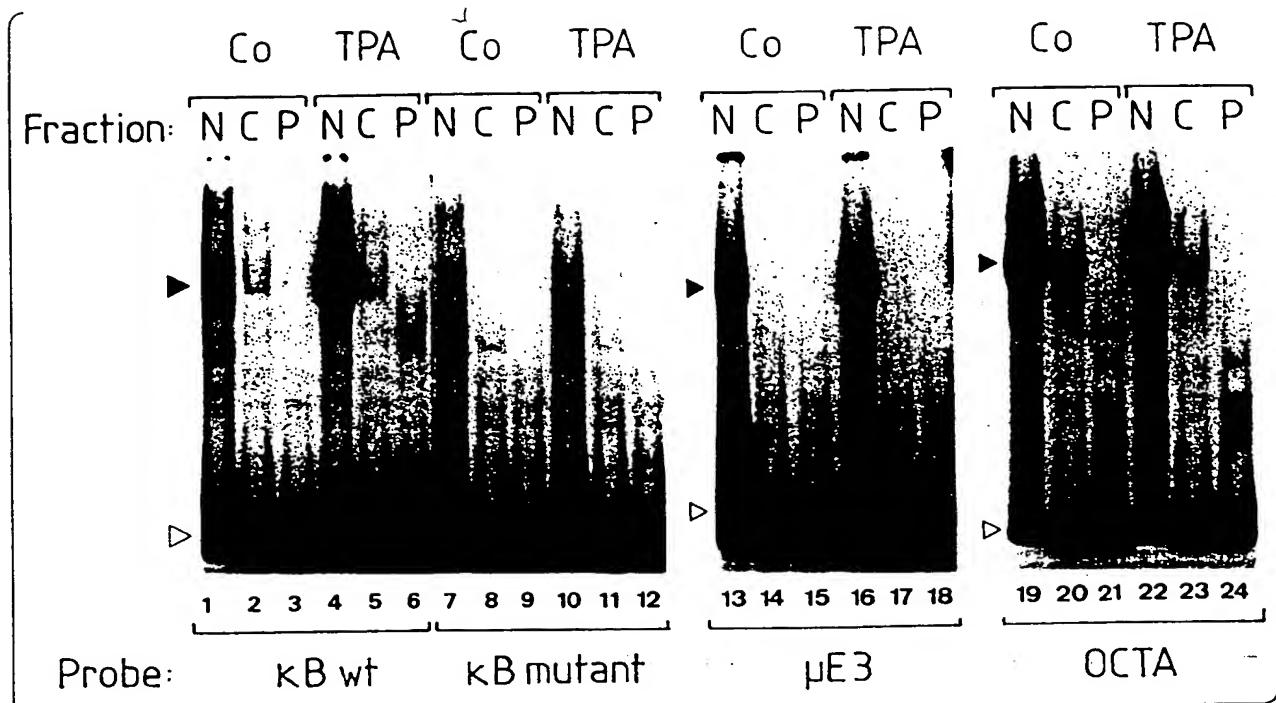


Fig. 29

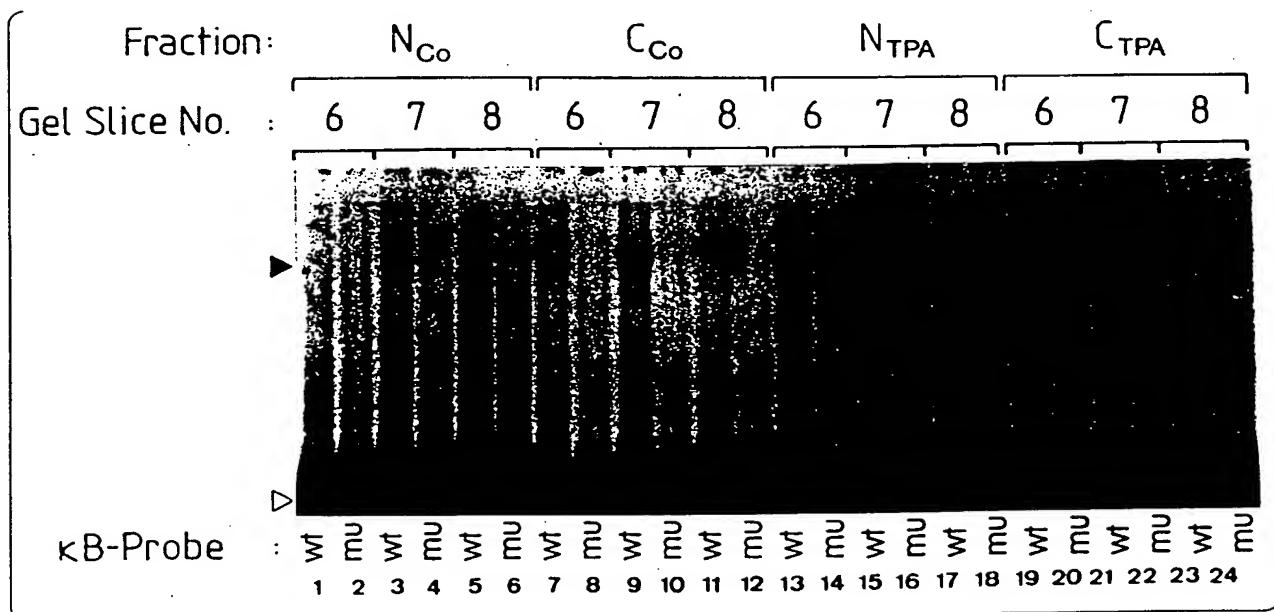


Fig. 30

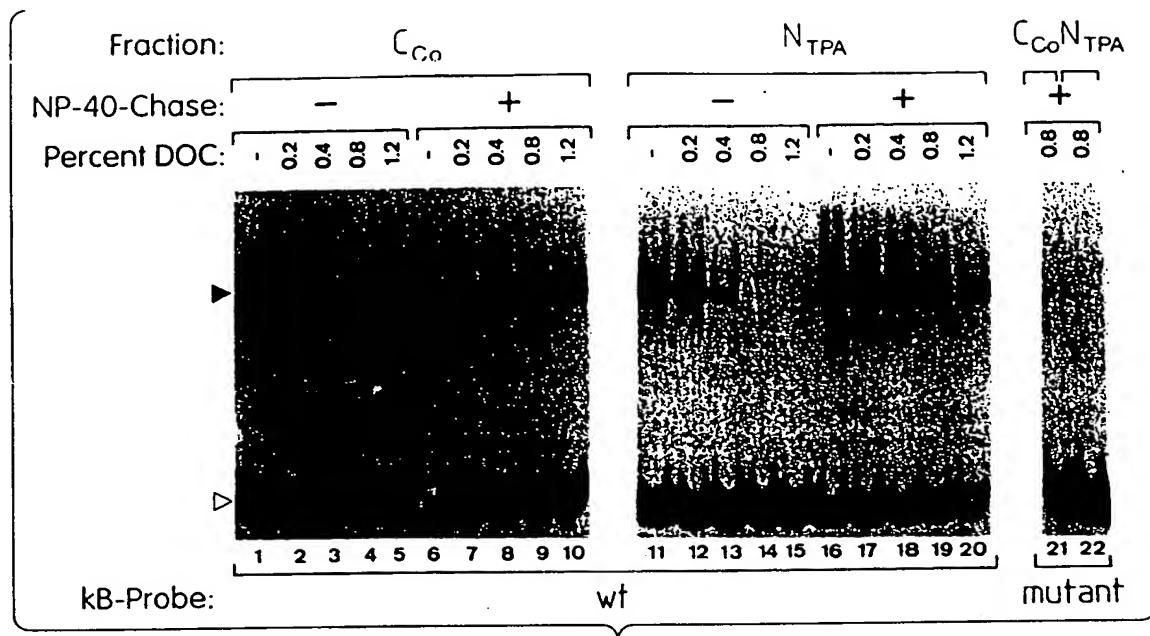


Fig. 31A

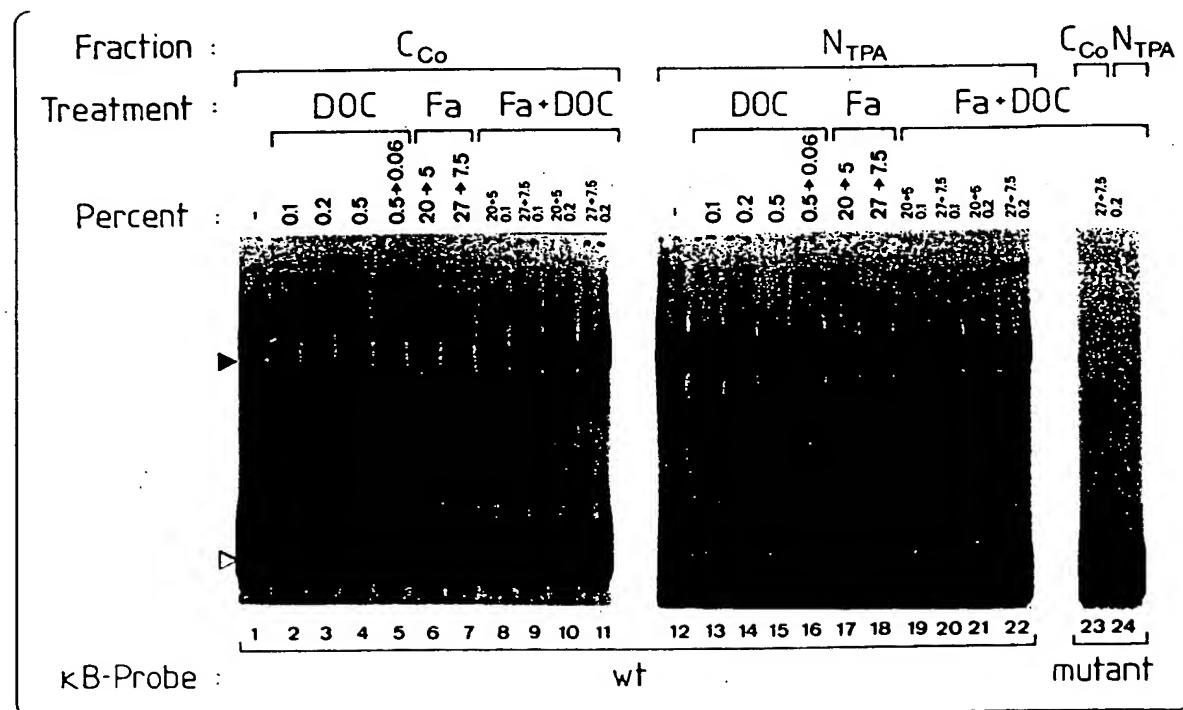


Fig. 31B

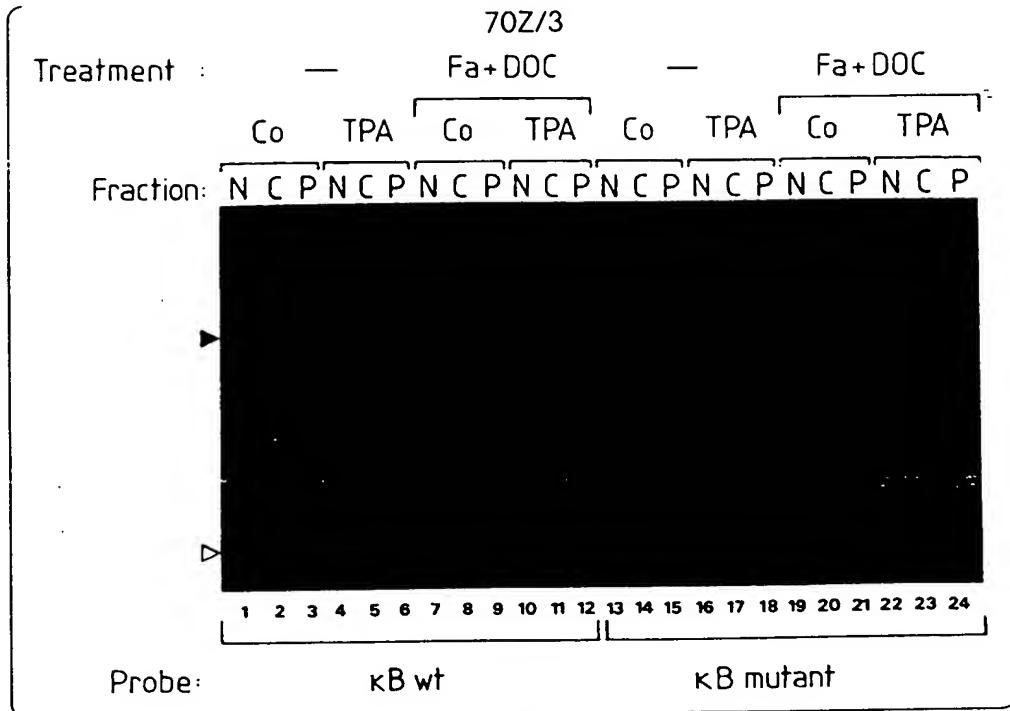


Fig. 32

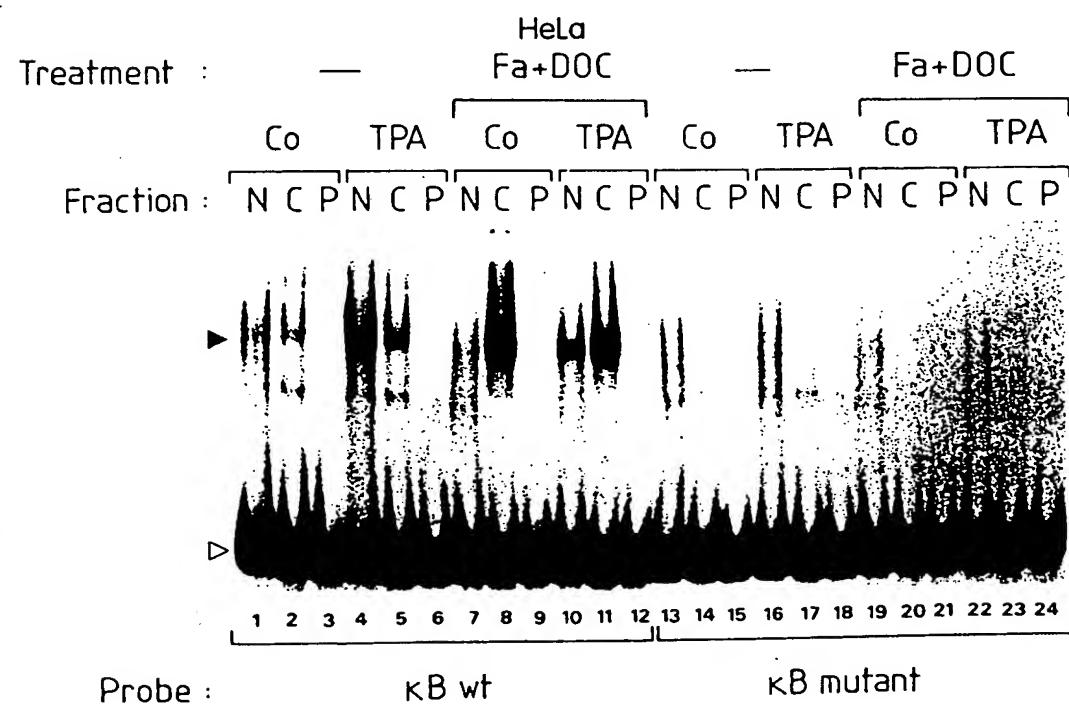


Fig. 33

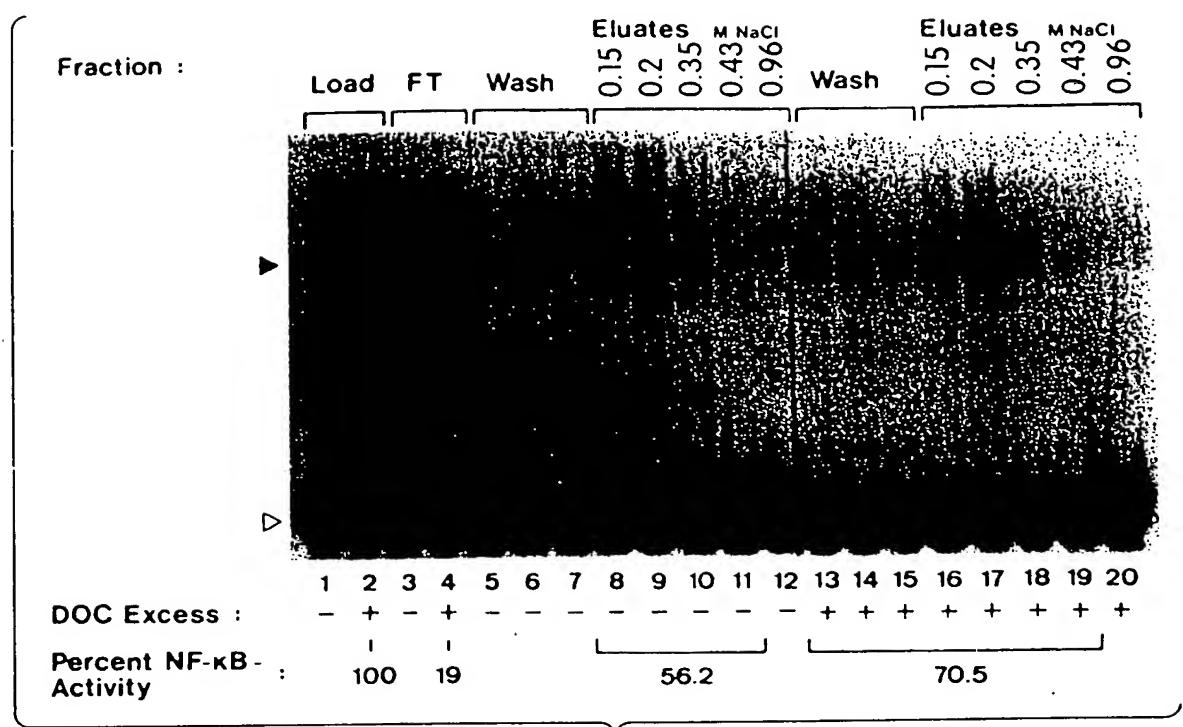


Fig. 34A

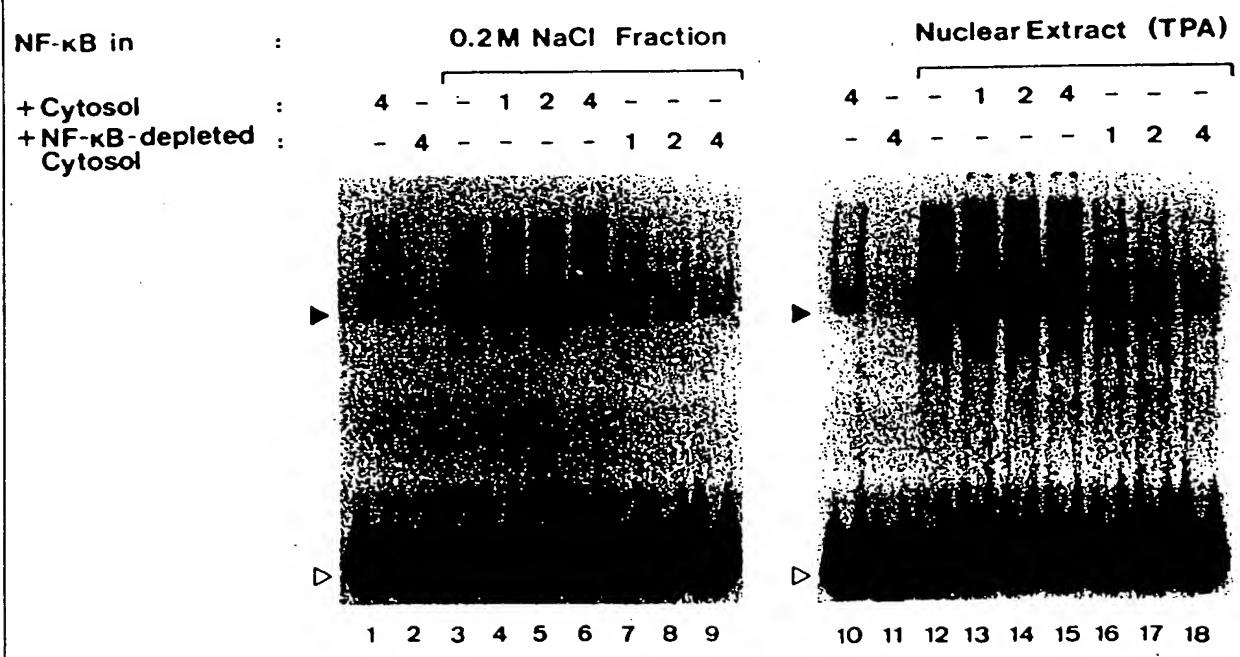


Fig. 34B

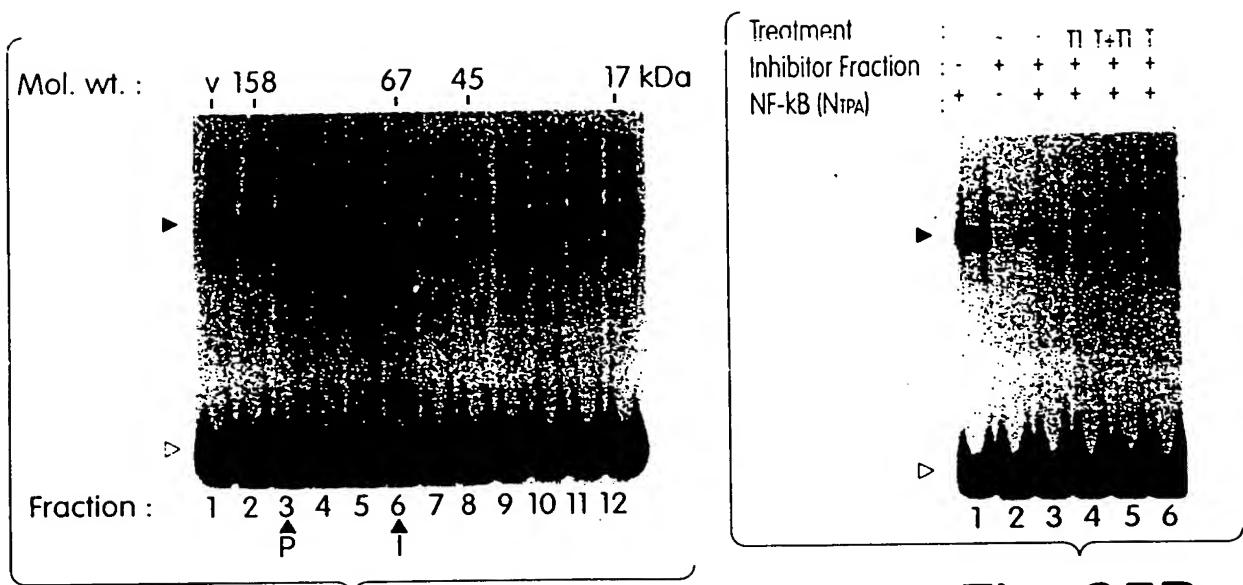


Fig. 35A

Fig. 35B

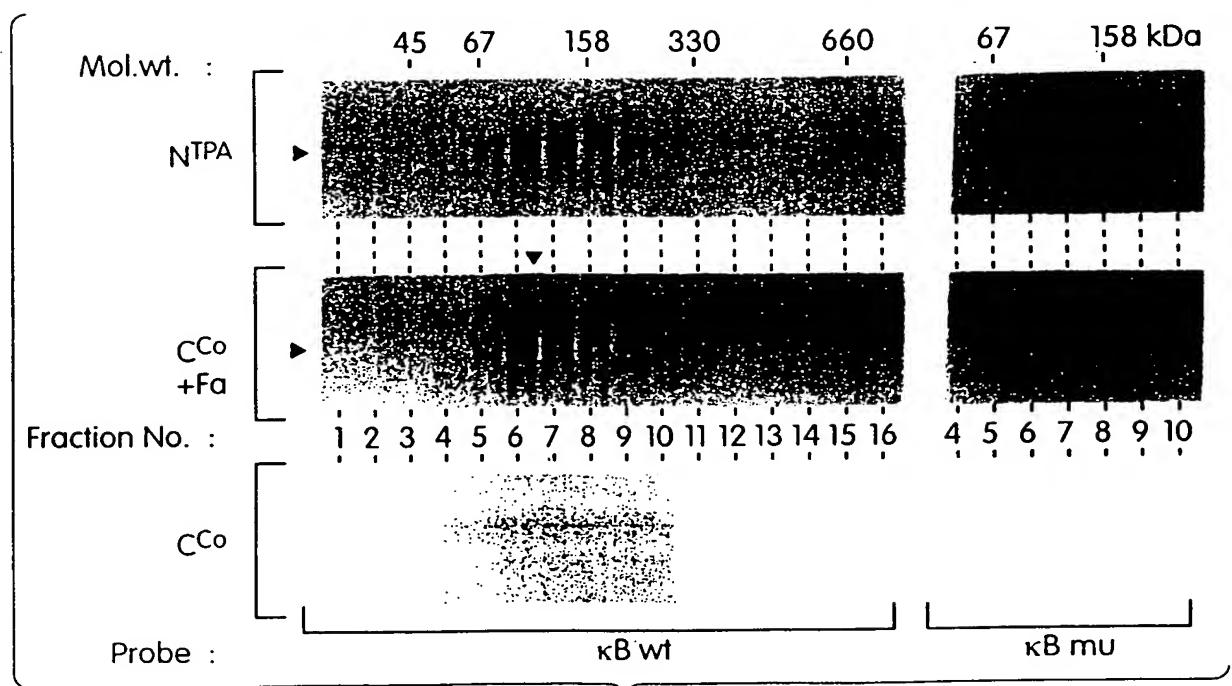


Fig. 35C

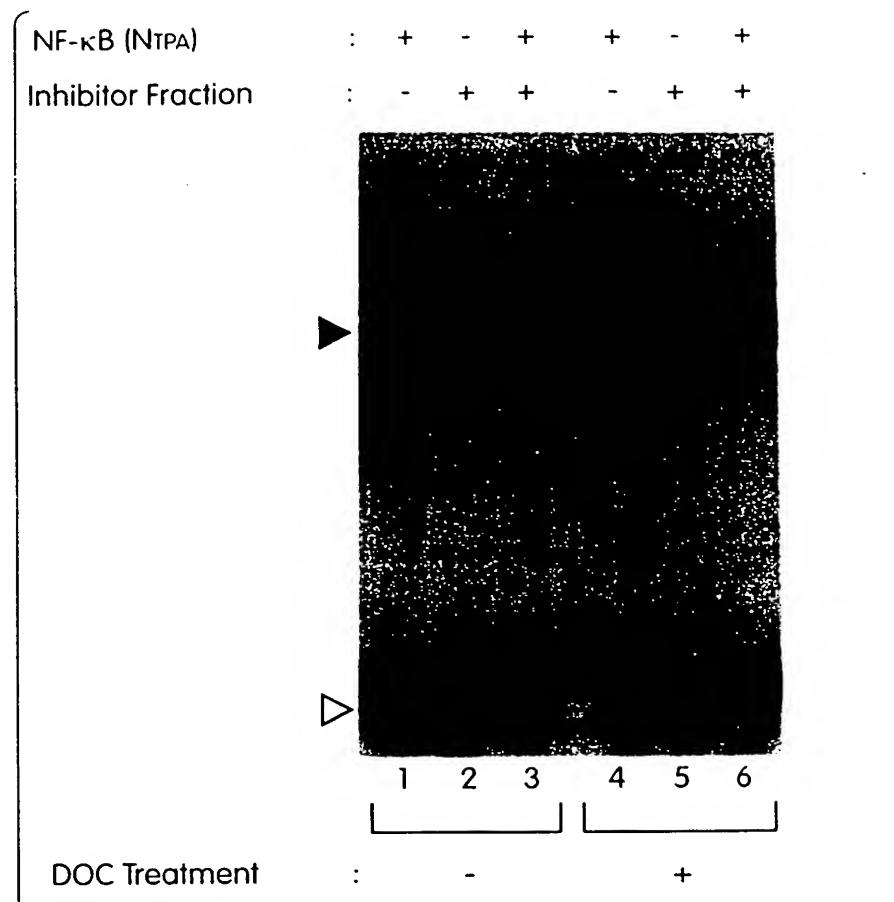


Fig. 36A

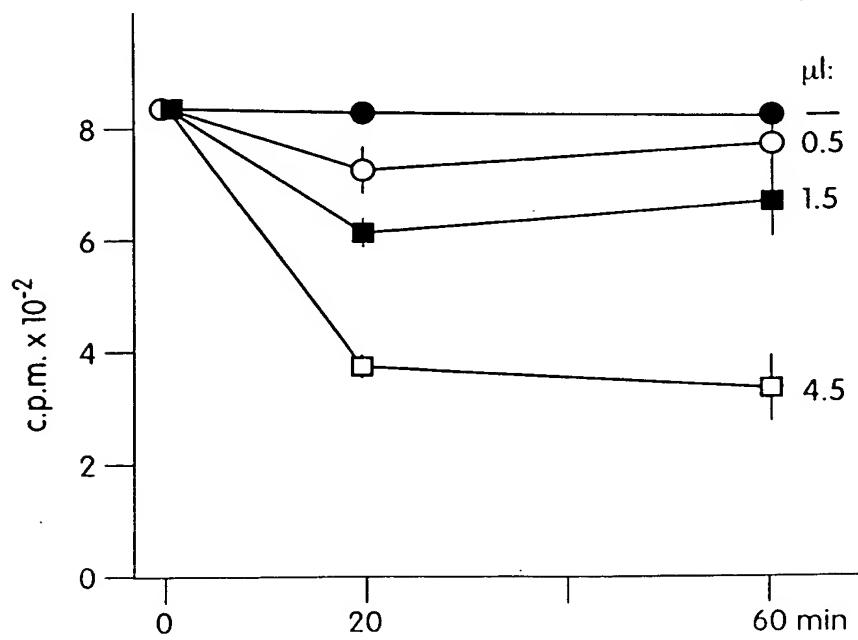


Fig. 36B

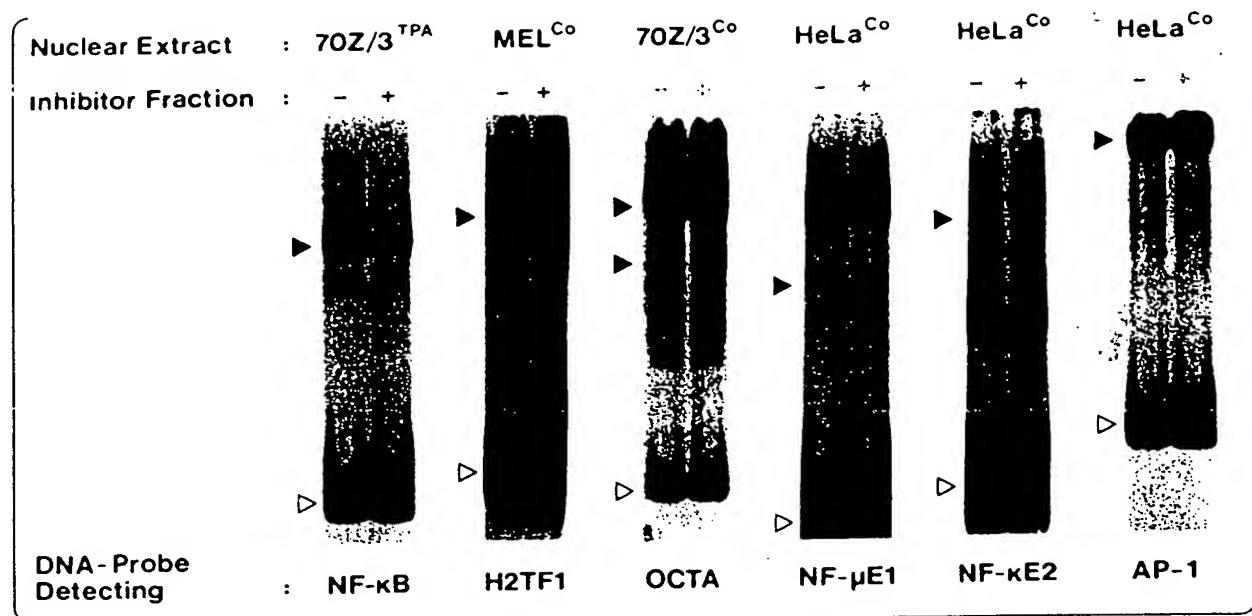


Fig. 37A

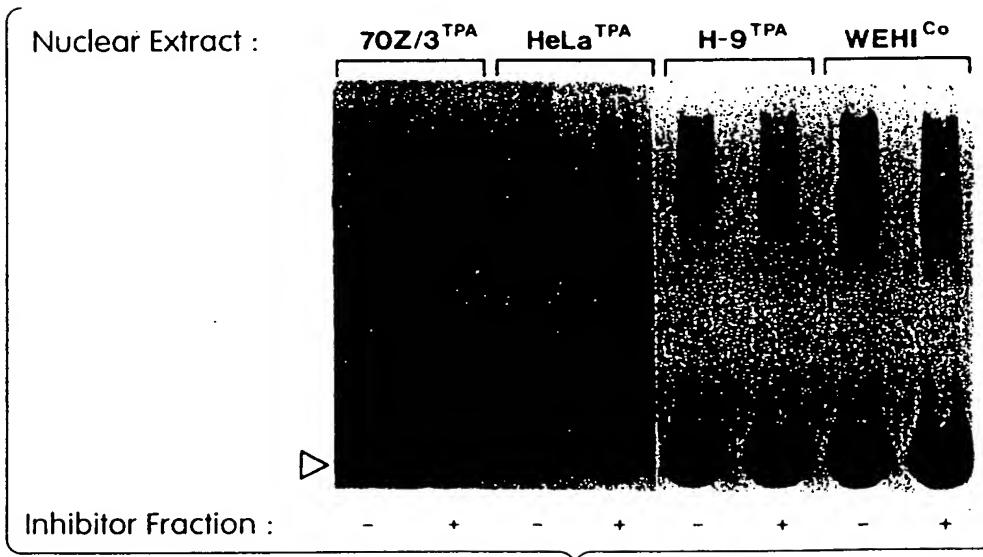


Fig. 37B

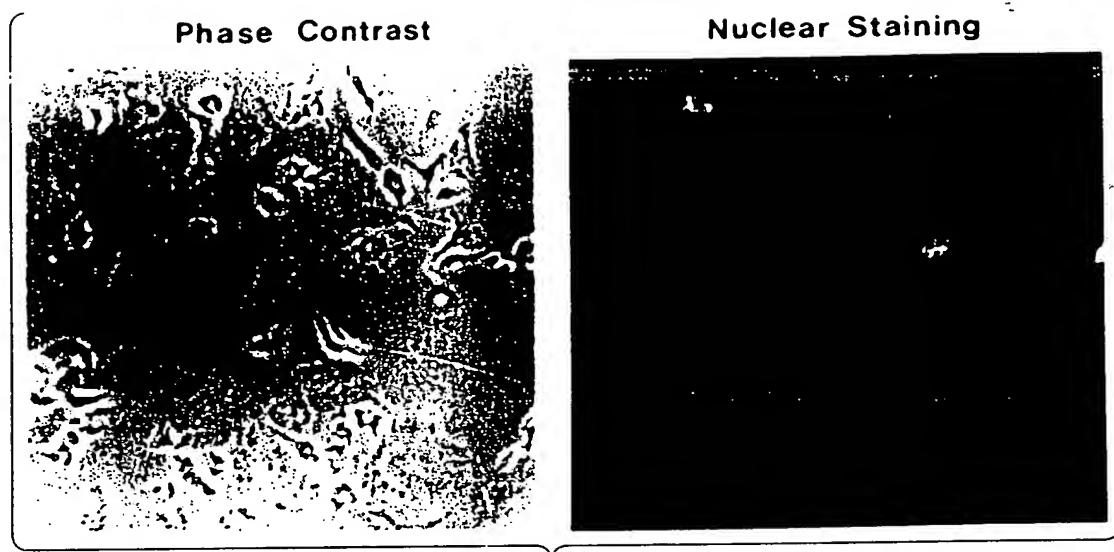


Fig. 38A

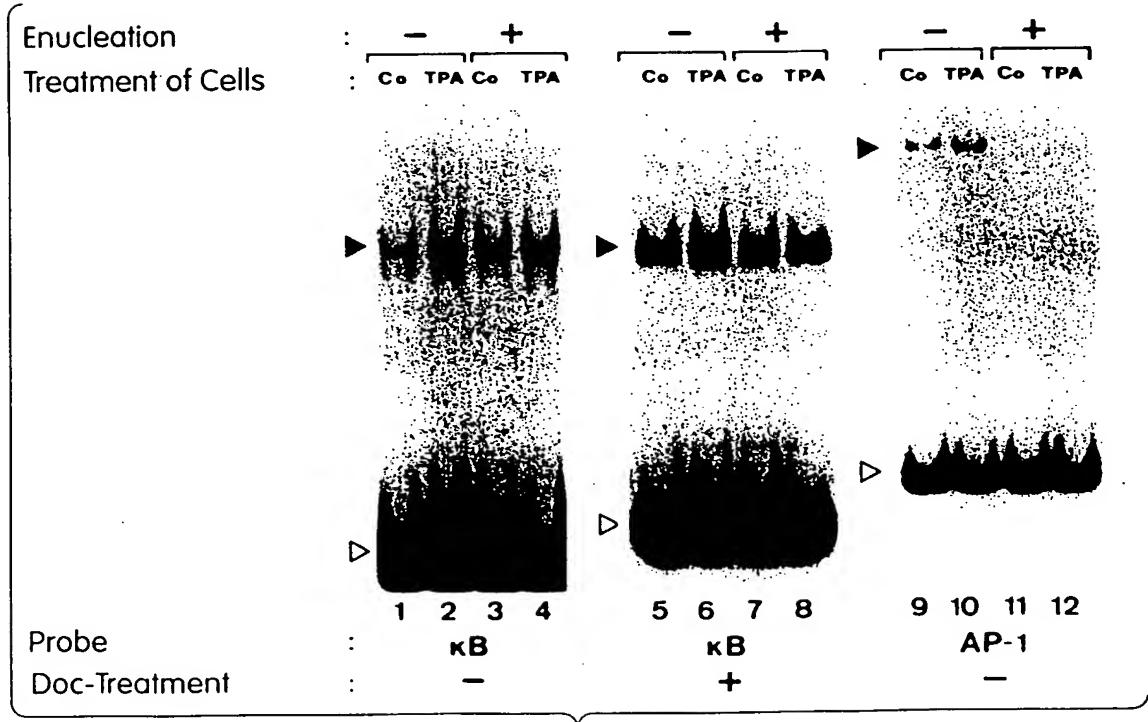


Fig. 38B

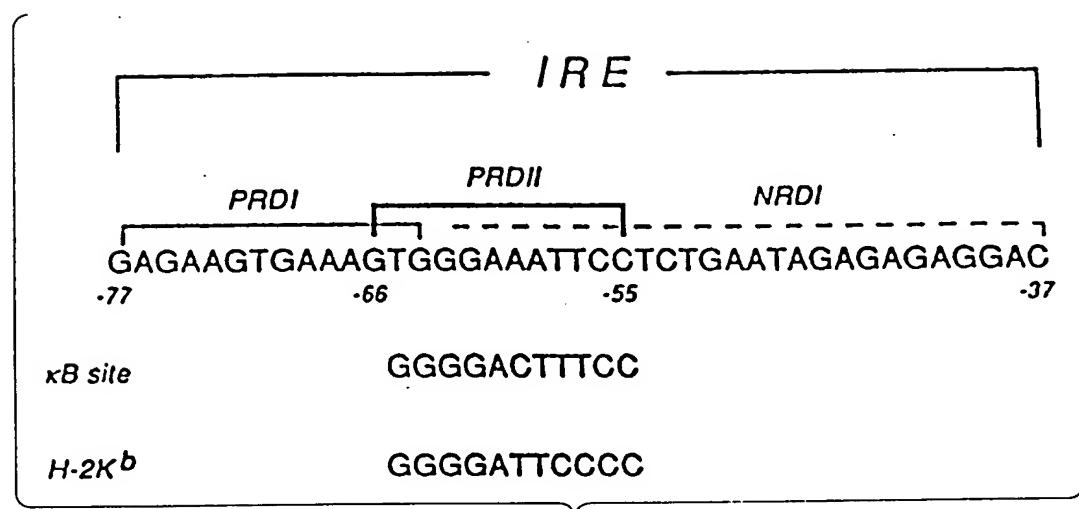
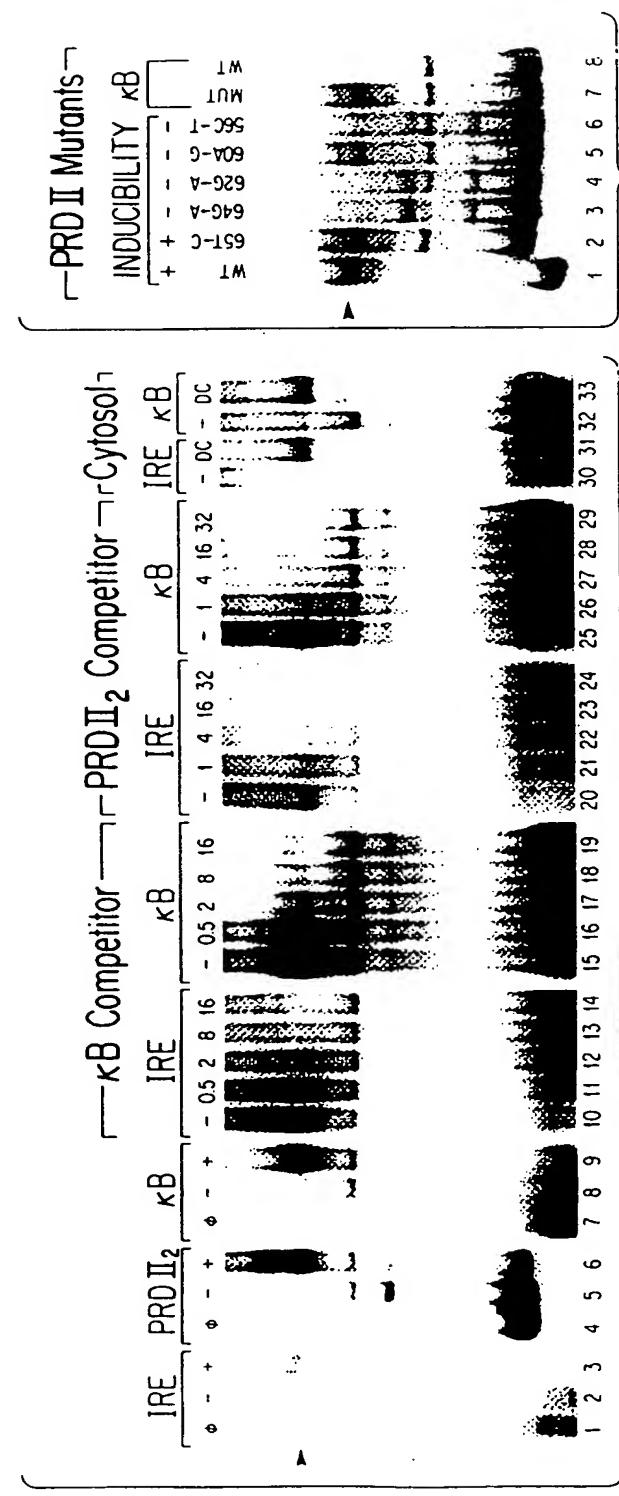


Fig. 39



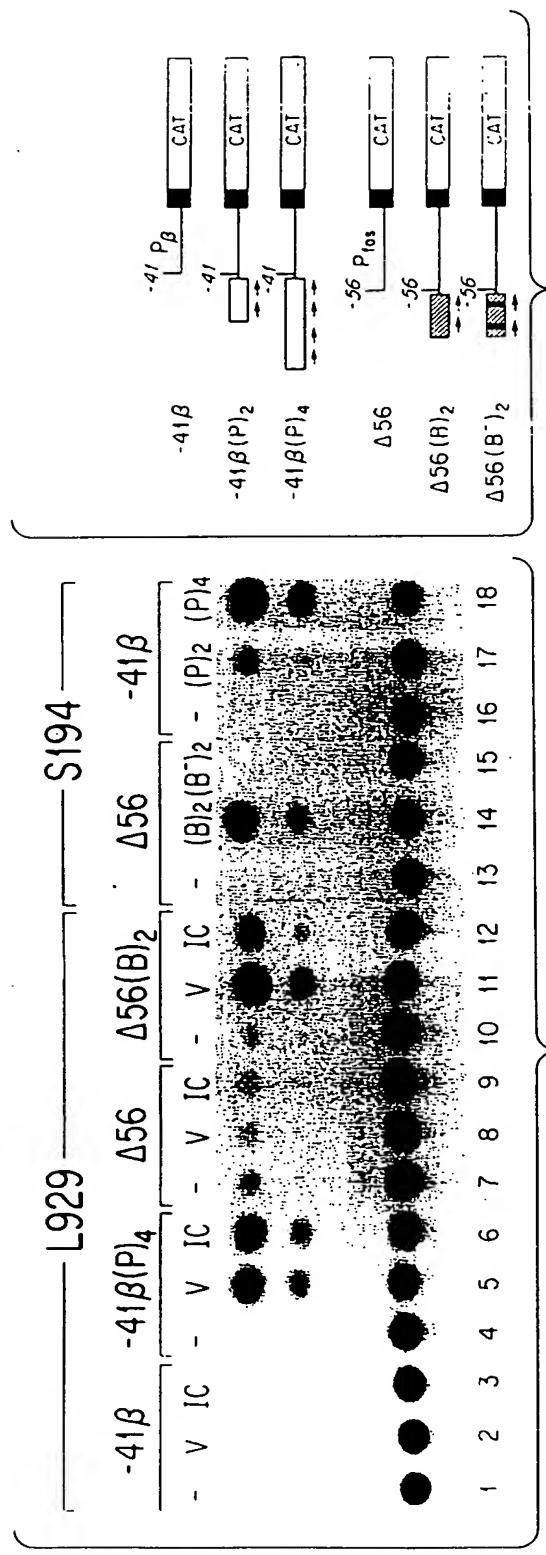


Fig. 41A

Fig. 41B

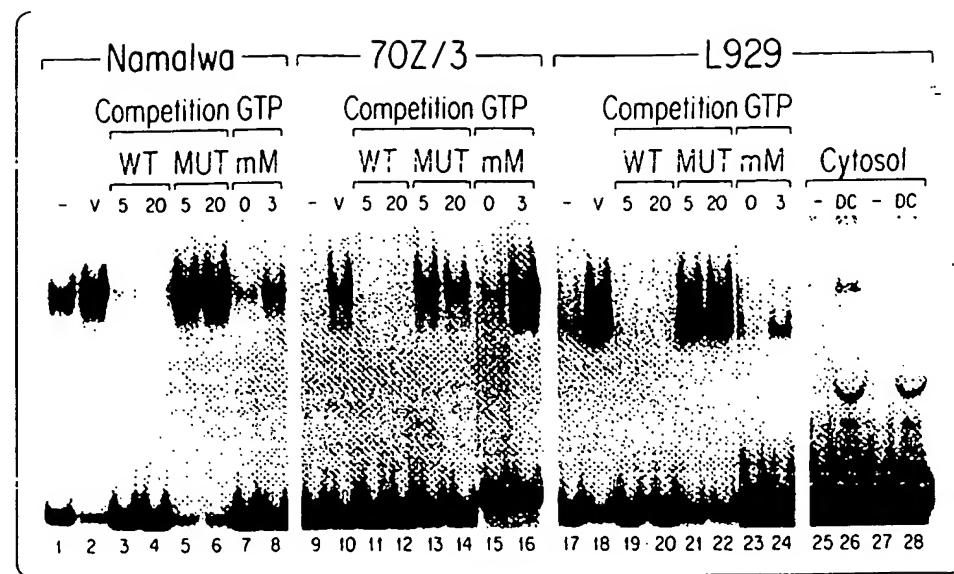


Fig. 42A

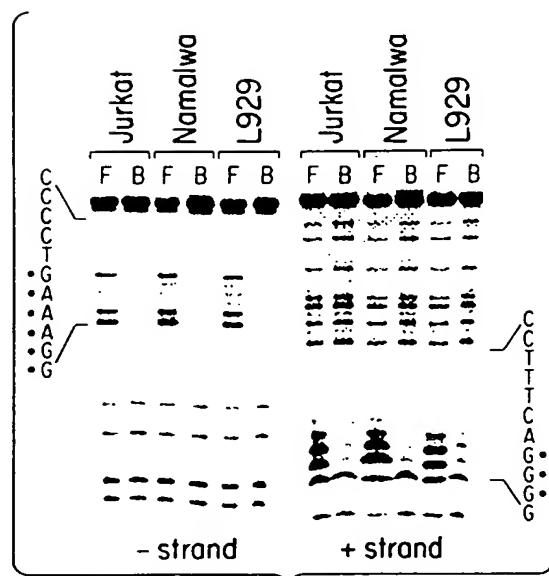


Fig. 42B

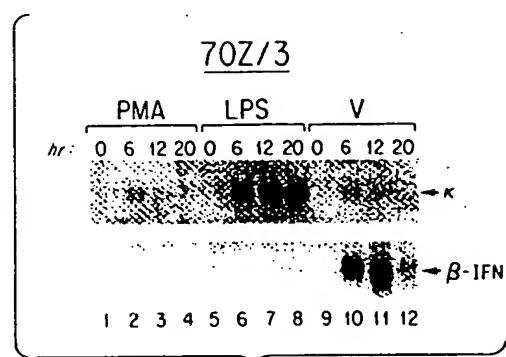


Fig. 42C

Figure 43

AACATTGCAACCTTATAAAATTAACTATTTCGACAATGCCGCAGAAGGAAATTCTGTGTTAGGTGCTGGTGGG
 AAAACACTATCTCCAGCTTGTAGGTTGAGCATACCAGAACCCACTTGATGAAATCACACAGAACAAAGTAGAGG
 AGGCAACTGTGAATCGTGGGCTATAAGCCATCAAGGGATCTGATGAAAGAACCGGAGACGAACCCCCCACC
 CCCAACAAACAGGATCGGCACCCAGAGTTAACAAAGTGGCTGACTTTGTTAAACACTACGTGGAACCCATAGTC
 CCGGATCAGTAGTTGCACAGCCCCCTCCCGACAGAACTACACCGCTGTTGGCTGATCCTGGCCACCCATGCTCT
 CCTCCAGGCCCCGGTTCTGCTCCTCTGTCCTGCGGGCTGGATTGAACCGCACACAAGTCTGCATCTGGCACGAA
 TTCTCATGGAACCCACGTCACTGAGGTACGGTACGGTACGGTACGGTACGGTACGGTACGGTACGGTACGGTACGG
 GCTCGGGGGAAAGTCTGGATAGTAGTACCTCCCCCTCTGCCACAAAGCAGCCCTCACATTCAAAAGTCTGACTCTCCTGA
 CAGGTCTATTGAGTTCTCTTCAAGGGGAGCCCTTGTCAAAACACACCTGGAGGGGGAGTCTCACCTCTCCCCAGC
 AACTCAGATCAGTGCCTTATTATAATGCTCCGGCCAATCCTGAGGTGCTGGTTGGGTGCTGGCTGGCTGGCTGGCT
 TGAACCTCCCCCTCCCCAACGGCCCTGGCATTTGCAATTAAACACTGGGATTCAAGGGCCAAATTCAAGGCCA
 GAGTGAGCAGTAGGATGGAGCTAACAGAGAGTGCACCTGGCTGACCCAGCCTGAATTGGTTCACCCAGAG
 ACTACAAGTCAGAAAGGCATGTTAGAAAGAGGCATGCTAAGGACTGATGGTGAACGGCAATTGGTCCCCACCA
 GCACAGTGGGAAGGGCTGGACAGAGAACGGAGAACGGAGAACGGTACAGAGATGTGAACCAATCAGTCGTGTTGAGC
 TCTGGTATAACTACATGTTAACTCTGCAAGAACCCGGTTGGTACCCAGGGTTAGAGTTACAGGGTACAGGGTAC
 ATAACACACCAACCAGAGAACCTGAGGTTATGACCCCCCCCCCAAAGGTAGATTCTGCCAGGTATA
 M T P P P K V R F L P S I

 AAGGGGGGGAAAGGGGGGGCCTGGTTCAATTCCCTTCACTGTGTGACCGAACGGTTGCTTTATTGTAAACA
 K G G E G G P W F I S L H C V T E V L L F V N I

 TCTGAAATTACCCGTCGTTTCCAGTCTCATCGTGTGCTCAGGCCACTGGAGGGAAATTCCCCGTCTCGGAAC
 L N Y P S F S L H R A V V R P L E G I P R L G T

 GCCGCCAGCACCAGCCAGGGCCGGCCGGCCGGCCAGCTCAGGCCCATGCTAACGGGGACCCACCGGCCCCGC
 P P P A P A A P R R P A S S A M L S A H R P A

Figure 43 (continued)

GAGCCGCCGGCTGGAGGGCTGGAGCCAGGAAACGGCAAGGCGCGCAGCTGGCTGGCCGACGACCCGCC
 E P P A V E G C E P P R K E R Q G G L L P P D D R H
 D S G L D S M K E E Y R Q L V R E L E D I R L Q
 P R E P P A R P H A W A Q Q L T E D G D T F L H L
A I H E E K A L S L E V I R Q A A G D A A F L N F
Q N N L S Q T P L H L A V I T D Q A E I A E H L L
K A G C D L D V R D F R G N T P L H I A C Q Q G S
L R S V S V L T Q H C Q P H L L A V L Q A T N Y N
G H T C L H L A S I Q G Y L A V V E Y L L S L G A
D V N A Q E P C N G R T A L H L A V D L Q N S D L

ACCGACAGGGGCTGGACTCCATGAAGGAGGGAGTACAGGCAGGCTGGGGAGGCTGGAGGACATCCGCTGCA
 D S G L D S M K E E Y R Q L V R E L E D I R L Q
 P R E P P A R P H A W A Q Q L T E D G D T F L H L
A I H E E K A L S L E V I R Q A A G D A A F L N F
Q N N L S Q T P L H L A V I T D Q A E I A E H L L
K A G C D L D V R D F R G N T P L H I A C Q Q G S
L R S V S V L T Q H C Q P H L L A V L Q A T N Y N
G H T C L H L A S I Q G Y L A V V E Y L L S L G A
D V N A Q E P C N G R T A L H L A V D L Q N S D L

GCGATCATTACGAGGAAAGGCCCTGAGCCCTGAGCGACTCACGGGAGGGCTGGGGAGCTGGCTGGGGAGCTTCC^{TA}GAAT
 A I H E E K A L S L E V I R Q A A G D A A F L N F
 Q N N L S Q T P L H L A V I T D Q A E I A E H L L
Ank. I
 TCCAGAACAAACCTCAGCCAGACTCCGCTCCACCTGGGGTGATCACGGGACCGGCCGAAATGCCGGAGCACCTGCT
 Q N N L S Q T P L H L A V I T D Q A E I A E H L L
Ank. II
 GAGGGCTGGGACCTGGATGTTCAAGGACTTCCGGAAACACCCGGCTCCACATGCCAGGGCTCG
 K A G C D L D V R D F R G N T P L H I A C Q Q G S
Ank. III
 CTCGGCTCAGTGTCCCTCACGGCACTGCCAGCCCCCACACCTCCTCGCCGAGGCCACCAACTACA
 L R S V S V L T Q H C Q P H L L A V L Q A T N Y N
Ank. IV
 ACGGCCATACATGTCCTCCATTGGCATCTTCAAGGATAACCTGGCTGGCTGAATACTGCTGTCCTTAGGAGC
 G H T C L H L A S I Q G Y L A V V E Y L L S L G A
Ank. V

copy of papers
originally filed

Figure 43 (continued)

GTGTCACCTCTGGTGAACACGGCCAGATGTGAACAAAGTGAACCTACCGGGCTACTCCCCATACCA3CTTACAT
 V S L L V K H G P D V N K V T Y Q G Y S P Y Q L T W

GGGCAGAGACAAACGCCAGCATAACAGGAGCAGCTGAAGCTGACACAGGCTGACAGATACTGCAGATACTGCACCGAAAGT

A E T T P A Y R S S 354

GAGGGATGAGGAGCAGTGAATCAGAGCCAGAGTTCACAGAGGATGAACCTATGTATGACTGCTGTATTGGAG
 GAAGACAGCTGACATTAAAGCAGAGGTTCTGTGAGAAGTGACTGTGTACATATGTATAGGAAAAAGCCTGA
 CTTTCTTCATTAAAAGAAAGTCTATACTCGAAGGAGAAAAAGTACTGAGATACTACACTGCCAGCCAGGAGC
 ACATCATGCTAACAGGTTCCATGCTGACCTGTACTTAAGTAACGGGATGGATGGATGTAAACATCGTTAAGAGATC
 AGTGAACATGCACACCACATCTGATAAAAGGCCACGTTATCTAAATTCTCTGCCACATGAGGATAACGGACTGCACGT
 CCAATGTGCTGTTGTCAAGAAATGGGTTGAGAGCTGCCTTGTGACACTAAGTGTGAGGAGTGTGCTCATCCCCCT
 CGGTGGCAAGACAGGCTTGCACAAACGTCCTGCATCTGCTGAAGACTGTGAGGTTGGCATTAGGTTGAGGCACGTGCT
 GTGCCCTGCTGCCCTGACCCCTGGCTGCTCAGGGTTGAGGAATGCCGACCATGGGAGAGGTGACCTGGCTGGAGG
 AAGGTAGCAATGATGTTAACTGTGGCATTGGAAACTGTGTGTTCACACCATGTGTGTCAATAATTGCTACACTT
 TTAGCAACTGTATAAGAATGTAATACTGTACATCTTGTATAATTATTGTGAGATATGTATTAA
 TTAAAAAGGAGATTCTGTAAAAA